THE STOCK MARKET, CREDIT AND CAPITAL FORMATION

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TRANSLATED FROM A REVISED VERSION OF THE GERMAN EDITION BY

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PREFACE

THE German edition of this book was written in 1929 and 1930, and published early in 1931 under the title *Borsenkredit, Industriekredit und Kapitalbildung* The book was No 2 in the series *Beitrage zur Konjunkturforschung* of the Austrian Institute for Trade Cycle Research

The English translation was done from the German edition after I had made considerable revisions of, and additions to, the original text The eight years that have passed since the first edition have seen a rapid development of economic thought Naturally, my own ideas have not stood still There are a few things of which I have become more certain than I was eight years ago, but there are many things of which I was cocksure then—and am very uncertain now My views have changed not only concerning the truth-value or probability-value, but also concerning the practical significance of many a statement

Under these circumstances the decision as to how to adapt the present English edition of my book was not easy Three ways were open to me (1) to leave the original text unchanged, (2) to revise the text and add whatever seemed necessary, or (3) to rewrite the whole book

The first of these possibilities is, I feel, appropriate only for a book which in the form in which it was first published has given rise to so much discussion in print that a revised edition would render unintelligible what the critics and commentators have had to remark This is true for all "classics," and also for some recent books, such as D H Robertson's *Banking Policy and the Price Level*, J M Keynes'

Treatise on Money and *General Theory*, F A Hayek's *Prices and Production* These books should not be permitted to be substantially revised in new editions, because the discussion of their theses and elaborations of them in books and articles by their critics is sometimes of no smaller importance than the original works A relationship of complementarity has developed between the original statements and the critical comments

Such considerations were not pertinent to my first edition My choice, then, was only between a completely rewritten and a largely revised edition Revision was more troublesome Yet, in consideration of whatever discussion my first edition has brought forth, I decided in favour of a revised edition which would still contain all those propositions which have found the friendly or unfriendly attention of my critics To give an example I should have been inclined to omit most of my remarks on "transfer payments" (Zessionszahlungen), had it not been for the interesting comments which Mr Koopmans devoted to them [1] Thus, I felt obliged to elaborate and qualify statements, the simple omission of which would have saved me much time I felt obliged, moreover, to adhere by and large to the original organization of the book, although certain rearrangements would have commended themselves I left the original structure as it was, except for the splitting up of one chapter into three, and the insertion of three new chapters (VII, VIII, and IX) This accounts for the 17 chapters of the present book as compared with the 12 of the first edition In order to facilitate a comparison, a table is given below

[1] J G Koopmans, "Zum Problem des neutralen Geldes," *Beiträge zur Geldtheorie*, ed F A Hayek

indicating the major changes of, and additions to, the text of the first edition

A word of apology may be needed in order to appease terminological fanatics who refuse to understand terms in any meaning other than that which they have been assigned in the newest Keynesian language The present book adheres to pre-Keynesian language, employing terms such as Saving and Hoarding in the traditional sense (corresponding most nearly to D H Robertson's definitions) In order to avoid misunderstandings I inserted in some places the adjective "intended" or "voluntary" before the word Saving It is to be hoped that the terminological prejudices which have developed in recent years will soon give way to the desire to understand what the others say no matter in what language they say it

Some explanation of the relatively high degree of abstraction in several chapters of this book may be in order Studies of the stock market are usually of the nature of more factual descriptions, and refrain from theoretical speculation about underlying relationships between stock-exchange speculation and the capital structure (production structure) of the economy It is, however, my firm belief that little can be said about the economics of the stock exchange without going below the surface and searching into the invisible connexions between visible phenomena I am fully aware of the suspicions which the practical man often entertains regarding abstract arguments I can only warn the practical stock-market expert who plans to read this volume of the fact that on many points he will have to follow me through intensive speculation He may perhaps confine his reading to Chapters III-IX and XVI-XVII, thus omitting the chapters where the discussion seems to be far off his special field of interest

PREFACE

Following the tradition of preface-writing, I wish to take the opportunity to acknowledge my indebtedness to all those who have aided me in shaping my ideas on the problems discussed in this book. My greatest debt is due to a group of loyal friends and distinguished economists who became known to the world outside of Vienna as the Neo-Austrians, but who considered themselves during the years of their close collaboration as members of the "Mises-Kreis." I mention particularly Professor Ludwig von Mises, now at the Institut Universitaire des Hautes Etudes Internationales in Geneva; Professor Friedrich A. von Hayek, now at the University of London, and Professor Gottfried von Haberler, now at Harvard University.

More acknowledgments are due for the form and content of the present English edition. First of all I wish to thank Dr. Vera Smith for the stylistic skill which she has lent to the translation. Furthermore, I have to thank several of my colleagues of the University of Buffalo, who advised me in matters of presentation and exposition; Professor Albert L. Meyers, at present of the Agricultural Adjustment Administration in Washington, who has read the whole manuscript; Mr. Bradford B. Smith, Economist of the New York Stock Exchange; Professor Wilford Eiteman, Duke University, who furnished valuable information; and Mr. Joseph G. Crost, who compiled the statistical tables for Appendix C.

FRITZ MACHLUP

P.S.—A delay in the publication of the book enabled me to bring most of the statistical series in the tables to Appendices C and D up to the middle of 1939. F. M.

BUFFALO, N. Y., *December*, 1939

Comparison between the Present and the First Edition

Chapter and section in the present book			Revisions or additions as against first edition	Chapter and section in the first edition		
Ch	I	1-4	negligible	Ch	I	1-4
Ch	II	4-5	negligible	Ch	II	4-5
		6, 7, 8	minor			6
		9	negligible			7
Ch	III	10-21	negligible	Ch	III	8-19
		22	minor			20
Ch	IV	23-31	minor	Ch	IV	21 29
Ch	V	32-33	negligible	Ch	IV	30 31
		34	completely new			—
		35	negligible			33
Ch	VI	36-41	negligible	Ch	V	36-41
		42-47	substantial			42-45
		48	negligible			46
Ch	VII	49-58	completely new			—
Ch	VIII	59-64	completely new			—
Ch	IX	65-68	completely new			—
Ch	X	69-71	substantial	Ch	IV	34-35
Ch	XI	72-74	negligible	Ch	VI	47 49
Ch	XII	75-76	substantial	Ch	VII	50-51
		77-78	negligible			52-53
		79-81	substantial			54-56
		82	completely new			—
		83	minor			57
Ch	XIII	84-89	negligible	Ch	VIII	58-63
		90-91	minor			64-65
Ch	XIV	92-96	negligible	Ch	IX	66 70
Ch	XV	97	negligible	Ch	X	71
		98	substantial			72
		99-100	negligible			73-74
Ch	XVI	101-102	substantial	Ch	XI	75 76
		103-104	negligible			77-78
		105-106	minor			79-80
		107	negligible			81-82
		108	completely new			—
		109	substantial			83
Ch	XVII	110	negligible	Ch	XII	84
		111-114	substantial			85-87
		115	completely new			—

Note—Revisions or additions are called *negligible* if they are confined merely to slightly changed formulations of otherwise unchanged ideas, *minor* if several paragraphs are reformulated, or qualifications added *substantial* if elaborations or qualifications imply changes in ideas or in emphasis, *completely new* if the whole section was not contained in the first edition

From the Preface to the German Edition

Current affairs have prompted this study of the relationships between the stock market, credit, and capital formation The growth of stock-exchange credits during the prosperity period evoked the interest, and in some part the serious concern, of those in charge of economic and monetary policy Lending to the stock exchange was officially assailed during recent years in Germany (1927) and in the United States (1928-1929) Intervention against stock-exchange lending was undertaken supposedly in defence of industrial interests This resulted in lively discussion of the problems involved, in the daily papers as well as in economic periodicals

In a paper read before the *Nationalokonomische Gesellschaft* in Vienna, on 25th April, 1930, I discussed the problem of stock-exchange credit My paper contained the essential theses of this book A discussion followed which gave rise to significant comments by several eminently competent economists Many of the remarks of the participants in the discussion have been embodied in this book

Fritz Machlup

Vienna, *May*, 1931

CONTENTS

CHAPTER I

COMPETITION IN THE CREDIT MARKET

1 The various types of borrowers, who compete for the limited supply of credit, evoke very different sentiments among critical observers of the economic system The class of borrowers which is least sympathetically regarded by the critics is that which uses the purchasing power, put at its disposal, on the stock exchange This is not surprising considering the attitude adopted by a large section of the community towards stock exchanges, towards the business that is transacted thereon, and towards the people who frequent them In so far as this is the mere expression of the resentment of the general public toward the "easy" and "effortless" gains of traders on the stock exchange, or the contempt of the moralists for "unscrupulous" speculation[1] or even the lack of respect of naive economic politicians for every kind of activity which is unproductive in a technical-physical sense, there is no scientific problem involved But there are serious scientific problems involved in the arguments of many economists who have come to take sides with or against particular classes of borrowers

Antipathies exist against stock exchange credit

2 It is a fundamental proposition of the theory of value and prices, and one which is to be found without exception in every introductory text to economics, that under conditions of perfect competition the avail-

[1] Concerning the attempts to judge economic affairs from a moral standpoint, Max Weber said "A highly developed stock exchange cannot be a club for the cult of ethics" Max Weber, *Gesammelte Aufsätze zur Soziologie und Sozialpolitik*, Tubingen 1924, p 321

able supply of any commodity will go to those buyers who offer the highest price for it Whether we take the popular example of the horse market, or the orange market, or any other textbook example, there are always "excluded buyers" who are squeezed out of the market because other buyers outbid them The pricing mechanism works in such a way as to distribute the limited supply among those who offer most, and to restrict the quantity demanded to the quantity supplied

The weaker bidder is squeezed out of the market

This explanation of the exchange mechanism constantly called for treatment of the problem of the comparability of the intensity of wants of different persons, otherwise it was open to question whether the result might not be to satisfy "less important" wants while leaving "more important" wants unsatisfied It was only when the impossibility of measuring the needs of different individuals came to be recognized that most economists decided to be content with a general prefatory reservation and to assume, for all practical purposes, that the amounts of money offered were the measure of the importance of wants

Writers often regard effective demand as a measure of wants—

It is a common experience to find that objections which have been disposed of in the early stages of an analysis, obstinately re-emerge at later stages The same objection which was dealt with and turned away in building the foundation of a structure is liable to reappear, often in another guise, a story higher, where it requires to be dealt with anew Thus the objection that economic importance or urgency should be measured in terms of indices other than the monetary expression on the free market, makes its reappearance in connexion with the controversy on productivity, where it takes the form of the question whether the distribution of productive factors in the exchange economy does actually tend toward

securing the maximum product A systematic adherence to the basic assumptions of pure theory led to the conclusion that the "productivity objective" was realized by pursuing the "profit motive" It appeared to those who had previously disposed of the difficulty of ranging economic ends in order of importance, that it was impossible to construct a productivity concept which was divorced from the concept of profit and which was at the same time unobjectionable from a methodological standpoint, and that pure economic theory must be satisfied with the profit standard

—and profits as a measure of productivity

But even those economists who accept this thesis have new pangs of conscience when they come to treat specialized problems, and again find themselves doubting the rationality of the results established by the working of the free market And so they begin to re-examine exchange transactions from the standpoint of whether it would not be "better for society" if a different set of people were successful in obtaining what the market had to offer

This is essentially what lies at the heart of the problem of the distribution of the available supply of credit among the various borrowers When at certain times a large part of the credit supply is "taken up" by the stock exchange, because it is the strongest bidder on the credit market, critical observers remark that "it is a shame that the stock exchange should have secured credits of which industry could have made much better use"

The stock exchange may be the strongest bidder for credit

The adherent of *laissez-faire* economics may decline from the beginning even to examine the question whether "industry" "is entitled to" credits in preference to the "stock exchange" He may avoid considering the motives, conclusions and false deductions of the critic, by having recourse to the argument that

No problem is left for a *laissez faire* stalwart

it is absurd both theoretically and practically to combat the results of free competition for credit The adoption of this attitude precludes all discussion before it has begun The reasoning behind would run somewhat as follows "If the credits were taken up by the stock exchange, the stock exchange was obviously able to outbid the other potential borrowers by paying a higher rate of interest, and it was undoubtedly enabled to do this by reason of its more profitable opportunities for employing the borrowed purchasing power The employment of credit on the stock exchange being more profitable than elsewhere, it follows that the credit is being put to its most productive use, and any further argument is beside the point"

There are several reasons why the present author's intention is not to dispose of the problem in this simple manner, but to examine it in detail First, it has to be recognized that the thesis that the productivity concept can be interpreted in terms of the profit principle is no longer universally accepted by pure theorists and still less by politicians. Secondly, the logic of the conclusions should be tested no matter whether or not the premises appear acceptable. Finally, the main problem is linked up with a whole series of subsidiary problems whose detailed treatment is both important and interesting

Examination of the problem is necessary

3 There is added reason for studying the problem of the distribution of the available supply of credit even for one whose faith in the working of free competition is unshaken One of the most important data in the whole problem, the supply of credit itself, is in fact partly determined by political factors, and thus is not the result of the play of free forces The modern organization of money and credit is such that it enables the banks to "create" credit (i.e , to grant

credit in excess of the proceeds of intended savings) and thus makes the credit supply partly dependent on considerations of a politico-economic nature But if the supply of credit is manipulated *quantitatively*, why should not its *distribution* among various classes of borrowers be manipulated also?

The problem is one of qualitative *v* quantitative control of credit

We have, then, to examine the economic arguments against a particular distribution of credit, and especially against the granting of credit to the stock exchange The problem of the granting of credit to the stock exchange is but one aspect of the important group of questions which are usually dealt with under the heading "quantitative *versus* qualitative" control of credit The examination of these problems will of course necessitate reference, at many junctures, to the elements of credit theory It is, moreover, of the nature of credit theory that it links up with the theory of capital formation on the one side, and the theory of money on the other In dealing with these topics we shall be dealing with crucial problems of trade-cycle theory

CHAPTER II

CONCEPTS USED AND PROBLEMS DISCUSSED

It is said that the stock exchange absorbs capital

4 Our main task in discussing the question of stock exchange credit is to examine the assertion that *"the stock exchange absorbs capital"* This contention is the chief indictment in the case against stock exchange credit This is evident from the fact that Cassel, the leading defender of stock exchange credit, used the same words in the title of two of his articles on the subject One of these is entitled "Does the Security Market absorb Capital?"[1] and the other "Does the Stock Exchange absorb Capital?"[2]

This contention contains ambiguous terms.

Undoubtedly the discussion has suffered a good deal from the lack of uniformity in the use of terms Not only did the various writers attach different meanings to certain technical terms, but also one and the same author often used the same term in vastly different senses in one and the same publication The most obvious and most serious of these confusions is connected with the concept of capital But even the term "stock exchange" does not always signify the same thing, and exactly what is meant by "absorption of capital" has seldom been unambiguously defined

With reference to this last expression it is worth noting that it may be possible to have the use of something without depriving someone else of it Stock exchange speculation has often been held to be just such a case, to the effect that while it needs capital it does not withdraw it from other uses However,

[1] The *Frankfurter Zeitung*, 8th May, 1927

[2] Quarterly Report of the *Skandinaviska Kreditaktiebolaget*, April, 1929

it is apparent that the charge of "using" credit must, if it is to be an "indictment," refer to a real "absorption," that is to say, the *withholding of capital from other uses* Now the alleged absorption may be either permanent or temporary

What absorption means

Disregarding the general public and certain journalistic writings, the view that *permanent* capital absorption took place was most emphatically advanced by Eberstadt[3] and more recently by Moulton [4] Eberstadt, for instance, speaks explicitly of "capital formation for speculative purposes"[5] and of accumulated capital being "sucked up" by speculation And Moulton, likewise, believes that "money savings" or "available investment money" were "absorbed" and "dissipated"[6] by the stock market boom As against these assertions most of the proponents of the anti-stock-exchange view claimed only that there is a *temporary* tying up of capital by the security markets We shall have to discuss in detail later how far this temporary absorption is possible and how far it is probable Cassel, for example, is not ready to admit even of this temporary tying up of capital

Some think of permanent absorption—

—others of a temporary tie up

5 In regard to the definition of the term "stock exchange" which is relevant here, it may be helpful to point out that we are interested for the purposes of this study in the "stock exchange as a borrower" This might be interpreted as including all persons who use borrowed funds to acquire securities or it might mean only that narrower group of people who hold shares temporarily (usually for purposes of profiting from changes in their prices) As to that narrower group, it is not unimportant to make a distinction

Who are "the stock exchange"?—

[3] R Eberstadt, *Der deutsche Kapitalmarkt*, Leipzig 1901

[4] Harold G Moulton, *The Formation of Capital*, Washington, D C, The Brookings Institution, 1935

[5] *Op cit*, p 23

[6] *Op cit*, p 151

—stock exchange members only?—

—or all buyers and sellers of securities?

between speculation by professional operators and speculation by the public Whether or not the majority of writers on speculation have had in mind only trading by professional speculators, our investigations will have to include amateur speculators, and in fact all people who have anything to do with security markets [7]

There is great confusion over the meaning of capital

6 The use of the capital concept, or, more accurately, of the capital concepts,[8] has been the source of infinite confusion, a "second confusion of tongues, a second Babel"[9] "Our science cannot possibly concede the right to its students for all time to call ten or twelve fundamentally different things by the same name" Thus wrote Bohm-Bawerk[1] in 1888 How much uniformity of terminology is there now in the twentieth century? The "capital" which is "drained away" or "dissipated" is evidently something quite different from the "capital" which is "replaced" by new and more productive capital The "capital" which "flows over" from the money market onto the capital market is again not the same thing as the "capital" which is "built up" out of borrowed credit It would be possible to give several pages of examples of this kind The words of Carl Menger written half a century ago are just as true to-day "There are," he said,[2] "as many different and equally confused

[7] See in this connexion the instructive section on the personnel of the security markets in W Prion, *Die Preisbildung an der Wertpapierbörse*, second edition, Munchen, Leipzig 1929

[8] The remarks of this section follow along much the same lines as my article "Begriffliches und Terminologisches zur Kapitalstheorie" in the *Zeitschrift fur Nationalökonomie*, Vol II, No 4, Vienna 1931

[9] Eugen von Böhm Bawerk, *Kapital und Kapitalzins, Positive Theorie des Kapitals*, fourth edition, Jena 1921, p 16 (first edition, Vienna 1888) (p 23 of the English edition)

[1] *Ibid*, p 29 (p 36 of the English edition)

[2] Carl Menger, "Zur Theorie des Kapitales," in the *Jahrbücher für Nationalökonomie und Statistik*, New Series, Vol 17, p 1

ideas as to what is the nature of capital as there are authors " It is almost unbelievable that, many decades after the publication of Bohm-Bawerk's *Positive Theory*, we should have to recall these words not as a historical reminiscence but as relevant to the present day [3]

The inadequacy of terms has made it customary to designate the produced means of production, *and* the funds made available for the construction of such goods, *and* the funds already invested in such goods, all by the same word "capital " The misunderstandings to which this was bound to give rise, and which have indeed had extremely unfortunate results, can only be avoided if we determine to make the multiplicity of concepts clear by giving them different names Whether we continue to designate one of the concepts by the term "capital" pure and simple, and look for new terms for the others, or whether we merely decide to use the word capital always with a qualifying adjective, is essentially a matter of indifference so long as the majority of economists accept the new nomenclature

One word is used for three concepts

It is now customary to call the produced means of production "capital goods" or "*real capital* " The funds available for the construction or acquisition of real capital are very conveniently described by the

Capital goods and money capital

[3] It must be admitted that the reason is largely to be found in a peculiarity of Böhm Bawerk's own theory This peculiarity is that while giving a very fruitful definition to one concept of capital—the concept of capital goods, which covers the produced means of production—he omitted to give a name to a second concept which is both a part of common speech and of great importance analytically, viz , the funds which are made available for the construction of capital goods Böhm Bawerk himself was fully conscious of the omission and he explained the "incongruency" between his capital concept and his interest theory as due to "considerations of terminological discipline " (The capital goods concept was the concept of capital which was most widely accepted in Bohm's time) He states that it would have been more to his liking "to have chosen some other concept of capital as the primary concept, one which would have been more in harmony with fundamental ideas of capital theory" (*op cit* , p 91)

term *"money capital"* Another concept which is somewhat broader than "money capital" is occasionally found useful, especially for a theory of a moneyless exchange economy, for some years past Cassel's term *"capital disposal"* has been used in the sense of power of disposal over goods which are used for the construction or acquisition of real capital This concept of capital disposal was adopted in a great deal of the German literature [4]

Capital disposal is distinguished from real capital

Bohm-Bawerk rejected the conceptual isolation of a "power of disposal" over an object from the object itself and reverted to the use of the word "capital" for describing "capital goods" Capital goods are sometimes called "future goods" because they are the produced means of production which do not yield consumable services until some future time The need to distinguish between the power to acquire goods for use in the capitalistic process (capital disposal or money capital) and the capital goods themselves (real capital) becomes apparent as soon as we introduce the assumptions of an exchange economy For readers faced with the phrase "the supply of capital" cannot always be sure whether it refers to the supply of capital goods or to the supply of money capital This is particularly awkward in discussions of the situation on the capital market, the function of which is to facilitate the exchange of money capital against titles

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[4] The concept of capital disposal is closely allied to Carl Menger's capital concept It is, however, not very euphonious and sometimes, in certain juxtapositions, gives rise to tautological expressions (as when we refer to an entrepreneur's "disposing over capital disposal") Nevertheless, a large number of writers, especially the followers of Adolf Weber, have adopted this terminology A detailed study of the problems connected with capital disposal has been made by Georg Halm in his article, "Das Zinsproblem am Geld-und Kapitalmarkt," *Jahrbucher fur Nationalokonomie und Statistik*, Third Series, Vol 70, Jena 1926, and also in his more recent article, "Warten und Kapitaldisposition," *Jahrbucher fur Nationalokonomie und Statistik*, Third Series, Vol 76, Jena 1932

to real capital The more common practice at the present time is to consider the supply of "capital" not as the supply of "future goods" but as the supply of "present purchasing power" which is offered in exchange for them Many people, however, insist on taking the opposite course, and considerable confusion has been the consequence The German writer Schulze-Gaevernitz, for example, in his widely read monograph on the German credit market,[5] says "The market for fixed capital, such as factory buildings and machines, that is to say, the supply of fixed capital in exchange for long-term creditor rights, is what is called the capital market" This makes it appear as though both parties in the capital market offer "future goods" in exchange—the one machines and the other securities—and the present goods (money or abstract purchasing power) fall right out of the picture In actual fact the "long-term creditor rights" concerned, are identical with the titles to real capital or its return, and these titles are offered in exchange for money capital Thus what takes place on the capital market is an exchange of rights in or over capital in the Bohm-Bawerkian sense (i e, capital goods) against capital in the Menger-Cassel sense (i e, money capital or capital disposal) It is of course immaterial which of the two parties is regarded as constituting the demand side and which the supply side the one offers money capital in exchange for rights over real capital, and the other offers rights over real capital in exchange for money capital

On the capital market present purchasing power is exchanged for titles to future goods

The didactical value of the concept of capital disposal is apparent in the theory of saving and capital formation For a long time there was much diversity of opinion as to what was the real nature of saving

Saving and capital formation

[5] G von Schulze Gaevernitz, "Die deutsche Kreditbank," in *Grundriss der Sozialökonomie*, V Abt, II Teil, Tubingen 1915, p 77

It was denied that saving was the necessary condition of capital formation, because real capital was not saved but produced It was denied that consumption goods were saved, since accumulated stocks of consumption goods were not capital Finally, it came to be recognized that it is the services of the factors of production that are saved, but this conception is one that is rather far removed from the concretely observable phenomena of economic life An offer of capital is not in itself an offer of productive factors If we make use of the term "capital disposal" however, we can express the idea as follows the saver provides the entrepreneur with capital disposal thereby giving him command over the services of productive resources of which the saver has forgone the present (or near future) enjoyment

Bohm-Bawerk may have been searching for a similar term, as, for example, when he says that the community invests "what is saved," and that, when "it" is transferred in the form of producers' credit, it increases the purchasing power available to producers for productive purposes and finally leads to a changed "disposition" over the factors of production [6] Why, it may be asked, should not this "something," which leads to a change in the disposal of the factors of production, simply be called "savings" or "saved funds," thus avoiding the need for the clumsy expression "capital disposal" or even for the term "money capital"?

The proceeds of saving are money capital

7 The concepts of capital disposal and money capital include more than savings They include in addition the current replacement funds (*amortization capital*) of the economic system which are available for reinvestment Savings previously invested in durable

Money capital is provided also by replacement allowances—

[6] *Op. cit*, p 149 (pp 115 and 116 of English edition)

capital goods become free again by way of depreciation allowances, and these, as a part of the gross receipts, constitute money capital or "free capital disposal" They do not, however, represent any increase in the total capital resources of the community The current inflow to replacement funds represents free capital disposal available for the construction or reconstruction of real capital exactly as do the proceeds of current new savings

As far as producers' goods industries are concerned, the sales-proceeds of the sellers of these producers' goods are identical with the investment in them by the purchasers of these goods The amortization allowances, which are a part of the sales-proceeds and which now become available to the seller for reinvestment, are thus part of the investment of the buyer What this means, however, is simply that the release of money capital at one stage of production is counterbalanced by a tying up of money capital in the next stage From the point of view of the economic system as a whole the money capital of the replacement fund is ultimately collected from the consumers by the sale of the final product to them The price of the final consumable product, provided that the expectations of all the producers concerned are realized, contains the various contributions to the replacement funds of all the earlier stages of production Thus, it is the consumer, who, in paying the price of the consumption goods, is making the replacement capital available to the producers, should the latter care to reinvest Nonetheless, in a money economy where the various stages of production are not integrated but constitute independent financial units, where each sells to another, the replacement funds realized at each stage have to be regarded as liquid money capital

The case is similar for so-called *working capital* or

circulating capital From the point of view of the economy as a whole the liquidated working capital cannot all be regarded as free capital disposal, the working capital of the producers in the intermediate stages is only "turned over," and is made free to the individual firm to the extent that the producers in the next succeeding stage of production tie up their working capital It is only when the whole production process has been profitably completed, and the finished product has been sold to the consumer that the capital disposal embodied in circulating capital becomes free and available for reinvestment It is possible, though not customary, to call this a case of amortization amortization takes place at the successful conclusion of the technical process of production to the extent of 100% for capital goods which are used up in the single process, and of smaller percentages for durable capital goods In neither case is it possible to talk of an automatic "reproduction of capital" It is truer to say that it depends entirely on the entrepreneurs as capitalists whether the funds which are made free by the successful conduct of their business, shall be "put back" and reinvested

—and by turn over of working capital,—

Capital disposal or money capital is however a term which includes not only saved or resaved purchasing power, i e , new saving and maintained saving, but also new purchasing power created by way of bank credit This, too, gives command over the services of productive factors for the production of capital goods, and is thus capital disposal There remains one other source of purchasing power which belongs to the same category, viz , liquid cash balances which suddenly come to be considered by their holders as excessive liquid reserves, and are consequently drawn on for the purchase of production goods and productive services A concept of money capital which includes

—and may also come from credit creation and dishoarding

current savings, *current replacement allowances*, *currently liquidated working capital*, and also *new bank credit* and disbursements of *surplus cash balances* is in complete conformity with the facts of practical economic life as they appear to the ordinary observer who is otherwise unacquainted with economic theory The inclusion of all purchasing power, which is not used for consumption purposes, irrespective of its source, brings the concept into harmony with the popular conception of money capital The fact that "inflationary" credit is grouped under a common head along with credit granted out of voluntary savings should not however blind us to their different nature A more detailed analysis of the alternative sources of the supply of money capital reveals marked differences in their effects on economic development [7]

There are thus five sources of supply of money capital

If we define money capital as sums of money which are available for the purchase of productive goods and services, and ascribe these funds to five main sources, we must be clear on the following points In the first place it must be realized that we are using "money" in the widest sense of the term to include checking accounts at the banks (It is commonly recognized that in the United States and England where the major part of money transactions are carried out by the way of cheque payments, new bank credit is an important source of new money capital) Further, it is important to recognize that it is impossible to draw rigid lines between the five sources of the flow of money capital We propose to distinguish (1) the supply of current savings, (2) the current inflow to the replacement fund, (3) the proceeds of the turn-

"Money" includes bank deposits

[7] If current saving is regarded as the result of strictly voluntary and spontaneous acts of income recipients, one ought to distinguish two more sources of supply of investible funds *fiscal savings*, i e, tax receipts used for investment purposes, and *compulsory insurance funds*, i e, contributions to social security reserves.

over of working capital, (4) additional purchasing power created by way of bank credit, and (5) disbursements out of surplus cash balances The distribution of the gross receipts of a business man or of a firm between (1), (2) and (3) is somewhat arbitrary or at least a matter of subjective estimate That part of the gross receipts which is allocated to the covering of direct costs of production and which represents liquidated working capital is not definitely determinable This is true in so far as the direct costs, especially the prices of raw materials, are subject to fluctuations, and hidden reserves may be built up in the valuation of stocks of raw materials still on hand This blurs the line between new savings and liquidated working capital The part of gross receipts which is regarded as belonging to the replacement fund is still less capable of precise determination It is only too well known that the amount of depreciation of fixed capital through wear and tear and obsolescence is purely a matter of conjecture If the depreciation allowances are conservative the replacement fund will appear to be larger, and saving out of business profits smaller, and if less liberal allowances are made for depreciation the figure for saving out of profits will be swollen at the expense of the replacement fund The rôle played by the valuation of assets in the process of calculating the net income of firms and individuals, and correspondingly in the calculation of the amount which is regarded as having been saved, is sufficiently familiar [8] These few remarks show that there can be no clear line of division between the supply of money capital derived respectively from the proceeds of savings, replacement funds, and liquidated working

There are no sharp lines between new savings and liquidated working capital,—

—or between new savings and replace ment allow ances ,—

[8] See the excellent analysis of this problem by G Myrdal, "Der Gleichgewichtsbegriff als Instrument der geldtheoretischen Analyse," in *Beiträge zur Geldtheorie*, edited by F A Hayek, Vienna 1933

capital In a later chapter it will also be shown that the division between these three sources of money capital on the one hand and credit expansion on the other cannot be made with the necessary clarity We shall see that there is no simple way of dividing bank credit into a supply of current new savings and a supply of inflationary purchasing power, we shall also find that disbursements out of replacement funds and liquid working capital are often difficult to distinguish from increased disbursements out of surplus cash balances And there are other cases where reality cannot be nicely sorted into our "boxes"

—or between new savings and created credit,—

—or between replacement funds, working capital, and surplus cash balances.

8 Money capital, no matter what is its source, is by definition available for the production of capital goods The concept of capital disposal, which may in many cases be used synonymously with money capital, has, however, been defined by many authors in another way which largely robs it of its usefulness Thus Cassel, Adolf Weber and some of their pupils do not restrict the term "capital disposal" to the aggregate of the funds available for the formation or creation of real capital, but include as well the funds already invested in the existing stock of real capital It would have been more useful if the term "capital disposal" had been applied exclusively to the free, disposable funds ready to be transformed into future goods (real capital), and had been contrasted with the funds already invested, especially since the latter are represented by already existing real capital There is no possibility of any further "disposal" over this "capital which is invested and not available for other productive purposes"[9], yet the authors of the term "capital disposal" did intend it to include these already invested

One should distinguish between free capital disposal and invested capital,—

[9] Carl Menger, *Grundsätze der Volkswirtschaftslehre*, Vienna 1871, p 134

funds They may point to the fact that from the standpoint of the individual firm, every item of real capital can be reconverted into "free capital disposal," and that for the determination of interest rates the invested as well as the free capital disposal is of importance

The theory of interest, however, is just where the distinction between free and invested capital disposal becomes important, since it is only free capital disposal, or, that is, money capital, which constitutes the supply side of the credit market What is called, for short, "capital supply" on the credit market is the supply of freely disposable money which comes from the sources mentioned above the proceeds of savings, replacement funds, liquidated working capital, surplus cash reserves and credit creation by the banks Among the determining factors on the demand side of the credit market is the quantity of capital disposal already invested or, more accurately, the existing stock of real capital,[10] because it is this which affects the expected returns of fresh investment opportunities, i e, the marginal productivity of capital[1]

—the former constitutes the supply of credit,—

—the latter affects the demand for credit

The two capital concepts, real capital and money capital,[2] are adequate for all essential purposes of economic analysis It is fairly obvious that *both* capital concepts, that is, the provision of money capital and its investment in real capital, are relevant to

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[10] Friedrich A Hayek, *Monetary Theory and the Trade Cycle*, London 1932, p 208

[1] There is no great difference between Bohm Bawerk's concept of the "contour lines of the incremental returns" of increased round aboutness of the process of production (*op cit*, p 466, English edition, p 405) and the most modern concept of "marginal efficiency of capital"

[2] In the German edition of this book (1931) I used the term "capital disposal" in preference to money capital I now think that the latter is preferable as it gives rise to fewer misunder standings

the process of capital formation Whenever we use the word "capital" without a qualifying adjective in our discussion, it will not be difficult to see which of the two concepts is meant The adopted terminology will have to stand the test of its usefulness in the subsequent analysis If the results are satisfactory, it may perhaps help towards establishing a greater degree of uniformity in the vocabulary of economists

The term "capital" usually calls for a qualifying adjective

9 The clear definition of concepts makes it apparent that the question whether the stock exchange absorbs capital is susceptible to a number of different interpretations The answer must deal with various possibilities total absorption *versus* temporary tie-up, of real capital *versus* money capital, in security speculation by professionals *versus* the general public

The main questions for discussion.

It is important, however, not to lose sight of the practical purpose of the whole inquiry The main point at issue is whether security speculation, and its demand for credit deprives other borrowers, especially industrial borrowers, of something This "something," which is alleged to be wasted, is usually said to be "capital" Our investigations will not be complete with the answering of the question as it has been formulated so far The questions which relate in the first instance to the possibility that capital may be withheld from industry may be put more broadly so as to ask whether industry does not (or does not also) suffer in other ways as the result of operations on, and borrowing by, the stock exchange We shall therefore have to extend our inquiry to deal with the often alleged "tying up of purchasing power," and "absorption of means of payment" by the stock exchange, and with its use of bank credit and influence upon the lending capacity of the banking system

This, however, does not exhaust the numerous objections which have been raised against speculation in securities and lending to the stock exchange We shall have to examine the further contentions that stock exchange speculation causes malinvestment and overinvestment, and that it is responsible for credit inflation on the one hand and dearer money on the other

With all these sins to account for, our programme is not a small one The purpose is neither to acquit the stock exchange of the charges brought against it nor to condemn it, nor is it our task to make recommendations of a political nature We shall take the list of accusations simply as an approach to general problems associated with the relationships between the stock exchange, credit and capital formation If the results of our theoretical analysis prove useful as a guide to bank policy or trade-cycle policy, so much the better

CHAPTER III

THE RÔLE OF CAPITAL IN SECURITY TRANSACTIONS

10 There is one sense in which the contention that the securities markets involve either a permanent or a temporary absorption of capital is so obviously absurd as to require no further discussion Real capital or produced means of production, such as bricks, iron girders, machines, pulleys, cranes, &c , are neither absorbed nor tied up by security speculation

However, even if no sense can be made of the hypothesis that security speculation absorbs real capital, it is nevertheless necessary to analyse those aspects of the *formation* and *utilization* of real capital which link up with the security market

The relationship between security transactions and the formation of real capital is to be analysed

11 The stock exchange is the place where securities —negotiable investment claims against assets and their periodical return—are bought and sold So far as old securities (whether bonds, i e , fixed interest-bearing securities, or shares, i e , membership rights in a corporation carrying the claim to a share in the profits) are concerned, it is immaterial from the point of view of real capital formation or its utilization how many times and at what prices these existing titles to a share in the yield of real capital change hands

The essential function of the security method of raising capital is to facilitate changes in ownership of the titles to real capital The transfer of other types of equities and of open lines of credits, meets

The security market facilitates changes in ownership of titles to real capital

with obstacles which hinder any very frequent operations of this kind But if the financial participation, or the loan, is acknowledged in some form of transferable certificate, then the exit of an old member of the company and the entry of a new one, or the repayment of one creditor and simultaneous borrowing from another, is very simply arranged through the purchase and sale of the securities

Shares and bonds—

We are here bringing the two forms of security, stocks and bonds, under one formula which abstracts from the legal distinctions and concentrates on the essential economic characteristics common to both As to their periodic share in the return of the enterprise we may call both capital shares, while if we wish to emphasize the transfer of purchasing power we may regard both as credit transactions There has been a great deal of discussion as to whether, for purposes of economic theory, a shareholder is to be regarded as an entrepreneur or a creditor [1] Both viewpoints are valid and it depends on the purpose of the investigation whether the entrepreneur function or the creditor function should be placed in the foreground For our purposes it will usually be necessary to chose the latter For example, a joint stock company has the choice of meeting increased capital requirements either by issuing shares or by issuing bonds If the company in the given market situation takes the first course, we shall be wise, in treating problems of credit theory, to stress the borrowing aspect of the operation, rather than to consider the purchasers of the new

—both may be treated as instruments in credit transactions

[1] F H Knight considers the shareholder as the entrepreneur because he bears the risk of the enterprise See *Risk, Uncertainty and Profit*, pp 291 ff R A Gordon on the other hand is more inclined, under the modern separation of ownership from control, to take control as the criterion of entrepreneurship See "Enterprise, Profits, and the Modern Corporation," in *Explorations in Economics, Notes and Essays Contributed in Honor of F W Taussig*, New York 1937, p 312

shares as new entrepreneurs Likewise, when we are analysing the case of an investor, who considers whether he should invest his liquid funds in bonds or in shares and eventually decides in favour of the latter, we should not hesitate to class this purchase of shares as a loan operation from the point of view of our analysis of the credit market

The chief advantage of the security method of lending and borrowing is that the credit obtained through the issue of securities is a long-term one for the borrower (in the case of shares, it runs for the entire life of the business enterprise) while from the point of view of the capitalist it is not a long-term loan at all, and has in fact no definite term If the capitalist should at any time need the funds, which he transferred to the corporation, he can get them back by selling his security As a rule, this withdrawal of the "loan" has no effect on the corporation, because one capitalist's place is taken by another, the new purchaser of the share, and the capitalist who wants to realize his securities will be able to do so without loss provided he has exercised the necessary care in choosing his investment and the security market is sufficiently active

The security method of transferring capital —

—short term for the "lender,"—

—long term for the "borrower"

12 Professional security speculation creates what may be called a reservoir for the easy equalization of supply and demand at any moment of time, so as to prevent wide fluctuations in security prices due to fortuitous circumstances Without this "reservoir for stray securities" it is unlikely that all shareholders who wanted to realize their securities would be able to find investors who were willing to buy them just at the right moment An offer for sale of securities for which there were no immediate buyers would cause a fall in prices, and shareholders who were obliged to sell on a weak market would recover much less

Effective speculation makes securities more liquid—

than the full amount of the money capital which they had placed at the disposal of the corporation when they purchased their shares This loss to capitalists would not of course represent a loss to society, since the business enterprise, and the real capital belonging to it, would remain unaffected throughout the transaction, unaffected by the change in ownership of the shares The loss of the capitalists who sold at a low price would be balanced by the gain of the buyers who bought so cheaply Owners of capital funds would, however, lose confidence in the possibility of being able at all times to sell securities without loss, and without this confidence there could be no "security capitalism"[2], there would not be the same full utilization of the smallest amounts of capital, and savings which were not intended to be of a long-term character would remain idle as the saver would wish to keep them in a form in which they would be available for use at all times Thus there would not be the same quantity of capital invested in industry as is possible through the institution of the security form of finance, and the active security market that goes with it.[3]

—and encourages investment of temporary savings

The function of the professional security speculator, or jobber (specialist), consists in this widening of the market which gives it the capacity both for taking up a sudden offer of securities for sale and for satisfying a sudden demand for securities It is only the existence of professional security speculation that

[2] Robert Liefmann, *Beteiligungs und Finanzierungsgesellschaften*, Jena 1909 The term "security capitalism" has recently been adopted by George W Edwards, *The Evolution of Finance Capitalism*, New York 1938

[3] To use the terminology of Keynes Without effective security speculation, securities are less liquid and the liquidity preference for money rises considerably See Keynes, *General Theory of Employment, Interest, and Money*, pp 226 9 Similarly F Lavington, *The English Capital Market*, p 95, Charles O Hardy, *Credit Policies of the Federal Reserve System*, pp 330 and 331

can prevent price fluctuations which are unrelated to judgments as to the yield and safety of the security Moreover, the professional speculator's carrying capacity is of importance in providing a fluid market not merely for the realization of old securities but also for the issue of new ones These security issues are held by professional speculators until they are purchased by more permanent holders, only gradually will the stray securities be taken out of the reservoir provided by the speculators and absorbed in the channels provided by the savings of the public

Professional speculation provides a market for stray securities

13 While, as has been indicated above, the mere change of ownership of existing securities, whether between genuine investors or between speculators, has little or nothing to do with the formation or utilization of real capital, the issue of *new* securities may mean the allocation of new money capital to industry We say "may" because there are cases of issues made by investment trusts which use the proceeds to purchase already existing shares, so that the transaction represents a mere change of ownership Or it may happen that the issue is nothing more than an operation for the conversion or funding of a previous loan or credit, in which case it is again not relevant to the formation of real capital An industrial enterprise may have financed an extension of its plant provisionally by means of overdrafts and open book accounts When it later funds its debts by increasing its capital stock (issue of securities), this second transaction has no impact on the sphere of real capital All that takes place is a change in the person of the creditor the first lender has his money capital returned to him and the subscriber to the new issue puts in his The fact that the money capital which is released flows back to the "money market," and that the newly invested money, on the other hand, comes

New security issues may mean allocation of new money capital to industry

This is not true for new shares of investment trusts or for refunding operations

from the "capital market," is a technicality which does not concern us in the present context

14 Let us now follow the chain of economic events which lead to the formation and installation of real capital

Saving alone is not sufficient for capital formation it requires investment also

Capital formation arises out of the application to productive purposes of that part of income which is saved The refraining of an individual from consuming part of his income does not of itself lead to capital formation If there is to be capital formation, the postponement of consumption ("waiting," or foregoing of present goods) needs to be supplemented by the creation of means of production ("investment," or production of future goods) In a money economy, when an individual refrains from using part of his money income as present purchasing power and saves it by putting it aside in a stocking or a money box, or by leaving it idle on current account at his bank, capital formation fails to take place, and saving by the individual does not give rise to saving from the point of view of society as a whole The withdrawal of means of payment from the market, as the result of hoarding, tends to augment the purchasing power of the whole of the rest of money income If the money prices of productive factors were sufficiently flexible, the income given up by the saver would accrue to other people in the form of a corresponding increase in their real income There would thus be no restriction of the total consumption of present goods and no extension of the production of future goods, unless it were to the extent that the deflation raised (through lower prices) the purchasing power of investors as well as that of consumers The reduction of consumption by the saver leads, when it is not accompanied by corresponding investment, and when factor prices are rigid, to a

curtailment of production and to unemployment This theme has received sufficient emphasis in recent years as not to require further mention here

A process of capital formation is set in motion only if the income which is not consumed is used for production It does not matter whether the saver is himself the entrepreneur or whether he places his purchasing power or money capital at the disposal of another entrepreneur The process of transferring savings to the producers may be performed through the borrowing and lending facilities of the savings banks, but mainly through the capital market which centres around the securities market Which one of these organizations for transferring savings will be used will depend in each case on judgments as to risk and liquidity (the possibility of withdrawal or realization by selling) and prospects as to yields If the savings are put into savings bank deposits, the yield will be equivalent to the interest payment If they are used to purchase fixed interest-bearing securities (mortgage loans, bonds, debentures) the yield will take the form of interest and capital appreciation If they are used to purchase shares, the yield will consist of dividends and capital appreciation The relative attractiveness of savings deposits, the bond market and the stock market, changes with the different phases of the trade cycle From time to time various economic reasons, usually depending on the experiences in the immediately preceding period, are also advanced for preferring, from the point of view of "society," one way of using savings to another

Ways of transferring savings to producers.

15 By way of continuing our analysis we may suppose that the money finds its way to an industrial firm through the purchase of newly issued shares of this

Money capital may be used for the formation of real capital—

firm by the saver We may take the case of a firm which plans to extend its power plant by building a new water dam The money capital of the saver will then be used by the investor for the creation of real capital in the form of a dam

We purposely chose the example of a dam because that is a clear case of a formation of new real capital The case is different if the firm buys machines which have previously been held in stock by the manufacturer in the expectation (justified by past experience) of a forthcoming demand for them In that instance, the real capital already exists, and the money capital transferred to the firm in question is merely used to buy already produced real capital But what was the source of the funds which made the production of this capital good possible? The stock of machines ready for sale is a part of the circulating capital of the machine factory No matter whether the machine factory obtained its circulating capital from the money market or whether it took it from its own resources, money capital from somewhere must have been used in the production of the machine This part of the machine factory's circulating capital is now turned over, i e, the factory gets back the money capital embodied in the inventory by selling the machine What makes it possible in our example for the machine factory to recover this circulating capital in liquid form? It is made possible by the fact that the purchaser of the shares puts money capital at the disposal of the firm buying the machine

—or for the purchase of already produced capital goods,—

—in this case it liquidates circulating capital tied up by the producers of the capital goods

In this example we illustrated the taking over of already produced real capital from the stocks of finished goods of the machine factory The same kind of thing takes place in part when the machines are produced to order This is true for the following reason whether the machine factory already has the

necessary materials in its own stocks of raw materials, or whether it has to obtain them from the stocks of finished goods ready for sale at the iron foundries &c, these materials were already, in large part at least, previously produced real capital They represented previous investment of circulating capital by the firms concerned Thus the production of machines constitutes in part the *employment of real capital already in existence* and in part the *formation of new real capital*, the former to the extent to which materials previously produced are taken over and equipment previously installed is used up, the latter to the extent to which services are added in the production of the machines [4]

Many cases combine formation of new capital with liquidation of old capital

16 Thus far we have acquainted ourselves with a number of cases in each of which the firm raises its money capital by way of an issue of shares but with different effects in the sphere of real capital

Different uses of the new money capital raised by corporations are reviewed

In one case the newly raised money capital was used to repay a bank loan Here the real capital had obviously been produced previously by means of the bank loan, and the new money capital (derived from the issue of shares) merely took the place of what was paid back to the first lender whose funds then became free again for new lending

In the second case the new money capital was used to build a dam, and here the new money capital clearly led to the formation of new real capital

In the third case, the new money capital was used to procure finished machines from inventory stocks This implied the taking over of already produced real capital with the result that the money capital previ-

[4] The concept "value added by a certain manufacturing process" cannot serve fully as a measure of formation of new real capital by this manufacturing process because it contains a portion of depreciation of the existing equipment

ously invested in the latter was released for use elsewhere. A fourth case was a combination of the second and third cases

Mention may also be made of a further case where the new money capital is intended for the production of new real capital, but instead of being invested immediately after it is subscribed, it is invested only gradually as the work of construction proceeds The money capital which is not required until later may be supposed to be lent to the money market on short term[5] until the date when it is required

Money capital is absorbed where real capital is produced

The foregoing examples showed that where new money capital was absorbed (i e, tied up without release for use elsewhere) there was formation of new real capital, where there was no real capital formation, there was no absorption of money capital The mere exchange of money capital did not involve absorption, since, the moment the new funds were invested, the previously invested funds were released Nevertheless there may be some doubt whether there is not a delay before the released funds are utilized again But a delay in making use of money capital will be penalized by loss of interest, and every private individual, more especially every business firm, tries to avoid this whenever possible In any case the problem of delays occurring in the utilization of purchasing power when it is transferred is a subject which will be dealt with in detail in subsequent chapters

So far, we have been concerned with the case of the absorption of money capital in the purchase of newly issued shares We have still to consider the possibility of the absorption or tying up of money capital by transactions in old securities

[5] Certain doubts connected with what is usually assumed to be short-term capital investment will be dealt with in Chapter XIII

17 It was Cassel who once made the statement[6] that "a reproducible durable good can exercise a demand for capital disposal once only, and the extent of this demand is equivalent to the costs of production of the good" Capital goods, then, require money capital once, i e, when they are produced When they are exchanged, or when the shares representing titles to them are exchanged, they require no additional money capital

Do transactions in old securities tie up money capital?

However, a purchaser of shares (who buys on a speculative market when stock prices are rising) often has to pay a larger amount of money capital than was required at the time of the production of the real capital behind the securities Does not this experience contradict what was said above? The contradiction is apparent only, as may be seen when one realizes that the larger amount of money capital which is invested by the purchaser of the shares becomes free simultaneously in the hands of the seller of the shares Let us suppose that capitalist A originally purchased shares at the price of $100 and that the issuing firm produced real capital for this $100 Now at a time when security prices are booming, capitalist B offers A a price of $120 for the same shares and uses his savings to buy them What is the amount of money capital which is now tied up, is it $100 or $120 or $220?[7] The simple consideration that the $120 paid by B is at the free disposal of A at the conclusion of the transaction should indicate that, in spite of the speculative purchase at the price of $120, the amount of money capital tied up is still only the original $100

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[6] Gustav Cassel, *Theoretische Sozialökonomie*, second edition, Leipzig 1921, p 187

[7] Even this does not exhaust all the possible alternatives. According to Mr Moulton's theory the result of the calculation would be $140 or $240 since he counts the seller's profits of $20 twice This will be dealt with in Chapter IX

This rather simple judgment, however, meets with serious objections which are not without justification With his customary self-confidence, Cassel, who was quoted above in this connexion, completely ignored this issue so that there is all the more reason why we should examine it here First, however, let us elaborate upon the example used above to illustrate another important charge which is brought against security speculation

Consumption of stock exchange profits is at the expense of capital formation

18 Granted that the seller (A) of the shares has the $120 at his disposal as the result of the sale, will he not treat the profit of $20 as income, and consume it? Does not the rise in security prices lead to the consumption of the amount of capital appreciation of the shares and thus cause an "absorption," namely, the consumption of a large part of the new savings? If A who sells the shares reinvests $100 (that is, the amount of savings invested by him in the first place) but consumes his gain of $20, then $20 out of the $120 newly saved by B is withheld from real investment and used for consumption purposes

The possibility that capital may be diverted into consumption channels through the consumption of profits is usually looked upon as being peculiar to security speculation If any producer, let us say a manufacturer of machines, uses his profits for consumption purposes, this does not usually evoke the protest that capital is being taken away from its proper uses And yet this profit is nothing other than the difference between the money capital obtained from the sale of the machines and the money capital used in their actual production If an industrial firm uses the funds it has borrowed to purchase machines for $120 from a manufacturer who produced them at a cost of $100, then the consumption of his profits

by the machine manufacturer uses up $20 of new savings

All consumption of profits—apart from those in consumers' goods industries—may be said to be at the expense of capital formation no matter in what stage of production the profits arise It may be that there is a particularly strong tendency among security speculators to consume their profits, although it is difficult to find conclusive evidence that this is so

It is said that profits from speculation are more likely to be consumed than other profits

19 The question may now be asked Is it not possible that the sellers of shares may consume the whole of the sales proceeds? Certainly they may, and indeed it very frequently happens that shares are sold by their holders for the express purpose of using the proceeds for consumption purposes It must not be forgotten that not only permanent, but also temporary short-term savings, are invested in shares Indeed, as has been pointed out in an earlier paragraph, it is the main advantage of the security system of financing real capital that it allows temporary savings put by for future requirements (that is, temporarily postponed consumption) to be used for the formation of fixed capital This procedure necessarily implies that "temporary savers" will withdraw their savings in order to use them for consumption

Temporary savings are used for financing real capital formation—

—and later withdrawn for consumption

Admittedly such withdrawals of capital on a large scale may have adverse effects on production, possibly preventing the maintenance of production at the current level, but this is less likely to happen under the system of financing through securities than under any other system Even if it should happen at any time that savings of a temporary character are withdrawn (for previously postponed consumption) in excess of new temporary savings invested by other individuals, it will seldom be the case that the sum of

the new temporary savings plus the sum of the new permanent savings will be exceeded It may be necessary to use new long-term savings to cover withdrawals of other savings, but the fact that in this case the new money capital does not lead to the production of new real capital means only that the real capital was produced in advance, i e, before the long-term savings were offered on the market

Such withdrawal is financed by new savings—

If, however, the withdrawals by "temporary savers" should not be covered by new short-term and long-term savings together there remains the buying power of professional speculators to fall back on If even this is not sufficient (in practice a large part of temporary savings are used to finance security speculation), then, as was mentioned in section 12, the deficit still does not take effect on the side of real capital the losses of the shareholders who sell out simply mean that the latter have so much less to consume The money capital which was originally invested in real capital will remain fixed in this real capital until it is fully amortized [8]

—the original investment still stands

20 Security holdings are sometimes realized, not because the owner wishes to use the proceeds for consumption purposes, but because he wants to invest his money capital somewhere else It is a widespread practice for firms to invest liquid funds for a temporary period in securities (either of other undertakings or of their own) and later to withdraw them, by the sale of these securities, when it becomes more profitable to use the money capital in their own businesses If the securities are taken over by new savers, the newly saved money capital may thus flow into industry despite the fact that no new shares are issued

The proceeds from selling old securities also may be used for investment in real capital

[8] See Halm, *op cit*, pp 14 ff

and that the new savings are used first to buy old securities

The flow of money capital to the securities market can thus lead to the formation of new real capital, even if there are no new security issues, so long as the seller of the old securities uses the proceeds for real investment If the transaction causes a rise in the price of the security, then the seller has so much more money capital available for "productive" investment

21 Support is lent to the argument that security speculation ties up capital by the consideration that the speculators, particularly the professional speculators (jobbers and dealers) need money capital with which to carry out their operations In examining the rôle of money capital which is "tied up by speculation," we may refer back to the observations concerning the function of professional security speculation made in an earlier section According to these observations, it is the function of the professional speculator always to be ready to take up securities when no investor is immediately at hand So far as newly issued shares are concerned, it is clear that the money capital of the speculators is invested in the newly built capital goods of the issuing corporation So long as the speculative market has to "hold the baby," as the jargon of the market expresses it, when a new issue is not immediately taken up by the public, the money capital that is "tied up in speculation" is no doubt tied up in production

Money capital may be used by speculators—

—for carrying new securities temporarily—

What productive service is performed by the money capital which is used for speculation in old securities? The service performed is filling the gap which is created when money capital is being withdrawn by one saver and no other saver is ready at the moment to take his place The speculator jumps into the breach

—and for carrying old securities—

and takes over the title to capital goods[9] for a temporary period with his own money capital

The funds used by the speculators take the place of the money capital of the previous holders of the shares and they are invested in capital goods and therefore in production [1]

—and for "standing by"

When someone stands ready to provide a service in case of need, he is attached to the place without always having real work to do He is merely "standing by" This does not mean, of course, that this is the only function of speculative funds and that they do not also have a part to play in the productive process

If the service of "standing by" is recognized as being useful, no objection could be raised even if it did tie up money capital But it cannot be shown that it does so The professional speculator seldom keeps large funds on hand without using them since it usually does not pay to do so The funds owned by the speculators are almost always invested They borrow from the outside to the extent that they require funds for paying the sellers for the additional securities which they buy [2]

22 Against all this it has been contended that money capital may be tied up without being either invested in fixed capital or simultaneously released somewhere else Before going into the arguments on this issue, however, it will be useful to summarize the results so far reached

[9] It may be repeated that the already existing real capital always compels the provision of capital disposal See the excellent article by G Halm which was cited above If a speculator did not take over the shares that were offered for sale, then the necessary capital disposal would come out of the "bargain price" paid by the buyer and the "loss" suffered by the seller

[1] "This operation of carrying is the essential part of the speculator's work , but the public advantage to which this operation gives rise is most conveniently expressed in terms of an increased marketability of stocks and shares" Lavington, *op cit*, p 236

[2] See Chapter VII

Assuming that a speculator has obtained money capital either direct from the saver or from a bank, there are the following alternative ways of using it —

The alternative ways of using the speculator's money capital are summarized

(1) The speculator buys newly issued shares The issuing corporation uses the proceeds to repay a bank loan The money capital is thus once again at the free disposal of the original lender

(2) The speculator buys newly issued shares The issuing corporation uses the proceeds at a later date or gradually over a period for extending its plant, in the meantime it relends the proceeds at short term on the money market The money capital is at the free disposal of the short-term borrower

(3) The speculator buys newly issued shares The issuing corporation uses the proceeds to buy already produced instruments of production, or to produce or purchase capital goods whose manufacture involves for the most part the utilization of already existing capital In this case the money capital serves to take over or employ already produced real capital The money capital is thus at the free disposal of the producer of the capital goods

(4) The speculator buys newly issued shares The issuing corporation uses the proceeds to produce capital goods, which are produced in the main without the employment of already existing real capital In this case, the money capital serves to construct new real capital [3]

(5) The speculator buys newly issued shares The issuing corporation uses the proceeds for the purchase of other securities This may be the case of a producer who buys the shares as a temporary investment, or the case of an investment trust whose regular business

[3] In actual fact all real investment consists partly in outlays of type (3) and partly in outlays of type (4)

consists in investing in securities If the securities acquired by the concern are newly issued shares, cases (1-5) become relevant and if they are old shares, cases (6-10)

(6) The speculator buys old shares The seller uses the proceeds to repay a loan The money capital is thus at the free disposal of the original lender

(7) The speculator buys old shares The seller uses the proceeds to make a loan The money capital is put at the free disposal of the borrower

(8) The speculator buys old shares The seller uses the proceeds in production as in case (3) The money capital serves to take over or employ already produced capital goods It is thus placed at the free disposal of the producer of the capital goods

(9) The speculator buys old shares The seller uses the proceeds in production as in case (4) The money capital serves to produce new real capital

(10) The speculator buys old shares The seller uses the proceeds for consumption purposes Here the money capital serves simply to replace temporary savings withdrawn for consumption

In cases (3) and (8), in (4) and (9), and in (10), the money capital is used for the purchase of goods or services In the first four of these cases it is used for the purchase of productive goods and services, and in the last case, (10), for the purchase of consumption goods and services In so far as these consumption goods, in case (10), are sold out of stocks, the money capital is transferred, as in cases (3) and (8), to the sellers of these stocks Where "original" services are purchased, the money capital becomes the

money income of the productive factors, and this purchasing power loses, for the time being, its character of capital If we neglect "dissaved" amounts which are used to purchase consumption services, we may say that cases (4) and (9) are the only ones where money capital is "absorbed," for it is only here that the purchasing power ceases to be money capital when it comes into the hands of the recipients These are the cases where the money capital is used to create new real capital

The money capital is either used in the production of real capital—

In all other cases the money capital is at the free disposal of its recipients, first, in the hands of the seller of the shares, and, subsequently, in cases (1) and (6) (loan repayments) in the hands of the previous lender, in cases (2) and (7) (new lending) in those of the borrowers, in cases (3) and (8) (purchase of existing real capital) in those of the producers, and in case (10) (purchase of finished consumption goods) in those of the retailer In all these cases the money capital remains "unabsorbed" and simply changes hands, finally becoming "absorbed" when it is used for the creation of real capital In all cases, furthermore, money capital was used in ways in which it could have been used also had it been transferred not through stock purchases but through any other form of credit transaction

—or it is still at somebody's free disposal

It is of course possible that the seller of the shares, or the lender who (in cases (1) and (6)) has his loan repaid, or the producers who (in cases (3) and (8)) sell their stocks, may not want to spend the money capital which they receive, but want to keep it liquid These would be cases of an increased desire to hold cash, usually described as increased hoarding, but they are not specifically connected with a universal speculative boom [4]

However, it may be hoarded—

[4] Chapter VIII will be devoted to this problem

—or used for repeated stock exchange transactions

The money capital which is transferred by way of stock transactions may, however, be used again to make a loan to the stock exchange or to purchase other securities It is to these possibilities that we now turn our attention

CHAPTER IV

THE ABSORPTION OF CAPITAL IN STOCK EXCHANGE SPECULATION

23 What does it really mean to say that money capital is absorbed in unproductive uses? By definition money capital is purchasing power which, not being used for present consumption, is available for the production of future goods or, that is, of capital goods The foregoing of present consumption would make it possible to increase the productive yield of the future It seems to be a recognized objective of economic policy that such productive opportunities should be utilized, for otherwise so much productive energy is lost to future production But this is exactly what would happen if money capital were "absorbed" before it could be invested in productive enterprise The case of such "absorption" is analogous to the case of hoarding

Unproductive absorption of money capital would involve a loss of potential energy to production

It was mentioned previously that saving by the individual does not necessarily lead to saving from the point of view of society, such is the case when the individual forgoes the consumption of part of his income but does not put it to any productive use When the individual hoards—saves without investing—he loses the interest which would have been yielded by an investment We have then to ask whether the loss to society is identical with the loss of interest on the part of the individual who hoards his savings As a first approximation it might be argued that the net product of the more roundabout methods of production, which are made possible by the investment

An individual saver who does not invest loses potential income

Is the loss from hoarding to society identical with the interest lost to the hoarder?

of money capital, is imputed, and paid, to the saver in the form of interest, and therefore that the loss of social net product is already allowed for in the loss suffered by the individual saver, that it would thus be double counting to consider the loss to society as something over and above this This conclusion overlooks the point that the marginal productivity of other factors, as well as that of capital, has to be considered An increase in capital equipment is associated with a decline in the marginal productivity of capital and a rise in the marginal productivity of labour The fact that this shift in the distribution of the national income fails to take place if savings are not invested has to be taken into account in addition to the loss of interest

Marginal productivity theory shows that the loss to society is slightly greater

These considerations belong to the "pure theory of distribution," and completely neglect certain propositions that have been established by "monetary theory", it is, however, becoming more and more evident that it is not permissible to disregard the "monetary aspects"[1] The loss which society suffers when money capital is not used, or when it is unproductively "absorbed," goes far beyond the loss of interest, because of the deflationary effects Even with ideal flexibility of all prices, including wages, the deflationary effect would spread over the various branches of the economic system only gradually, and the various "lags" would have a chain of disturbing effects When prices and wages are less flexible, and even rigid, the deflationary effect may entail long-lasting unemployment It is no wonder that in times when wage rates are very "sticky" every potential deflationary influence is examined with almost painful precision

Monetary theory points to further losses through the deflationary effects of hoarding

[1] In the German edition (1931) I did no more than refer to these points in footnotes and was justifiably criticized in consequence

24 So far we have admitted the absorption of money capital only where this absorption was "productive," or that is, where it led to new real capital formation In all other cases we argued that there was only a transfer of funds from one person to another If A, who is speculating for a rise, buys shares from B, then exactly the amount of money capital that is given up by A is placed at the free disposal of B at the conclusion of the transaction

Is there absorption if B receives what A pays?

We must now make sure that the argument is not invalidated by the "neglect of the time element" Economic theory abstracts from the passage of time on purely didactical grounds but frequently commits the error of failing to recognize that such an abstraction is not permissible in the final stages of the analysis The argument so far developed has abstracted from the time element in two respects First, it overlooked the circumstance that the mechanism of payment requires time, and that between the transfer of funds from the buyer of securities to the seller and the further utilization of their corresponding purchasing power, a certain time elapses during which the money capital may be regarded as tied up Secondly, it neglected to consider that, in times of heavy speculation, the sellers of shares may use the proceeds to purchase other securities, that thus a long interval may elapse before the series of transactions of this kind is finally terminated by a seller who turns the proceeds of his sale into productive channels instead of using them for further security transactions

The time element requires examination,—

—the delay of B's disbursement after A's payment may be considerable,—

—a delay may be caused by use of funds in continually repeated speculation

The first point is more a question of monetary theory, since it concerns the general aspects of the tying-up of purchasing power or media of exchange This side of the problem will come up for discussion later on (Chapters VI and VIII), and here we need only anticipate the conclusion by indicating that it

does not lend much support to the "absorption" argument. The second point will be discussed at once

It is contended that money capital is tied up in a long chain of security transactions

25 The contention is that at certain times the seller of shares re-employs the proceeds "for a speculative purchase of other securities which he now considers to hold out better prospects of speculative gains",[2] and that through a long chain of similar transactions the money capital is continually locked up in security speculation without being "used anywhere else in the economic process"[3]

The money capital which is used to buy newly issued industrial shares is believed to flow into "productive channels" The speculation, which is supposed to tie up capital, is meant to refer only to old shares or to newly issued shares of investment trusts and holding companies which use the funds to buy blocks of already existing securities The case where the sales proceeds are used forthwith for further speculative transactions so that the money capital is retained on the stock exchange[4] is neatly illustrated by Reisch in the following example

An example of a long chain of trading supposed to prove temporary absorption

"Let us suppose that 10 different shares, A to K, are dealt in on the stock exchange and that the issue proceeds of 1 million dollars each has flowed into the economic system in the ordinary way A part of these shares, let us assume for simplicity 50% of each, has not yet passed into the hands of investors but has remained in the hands of speculators these shares form the stock in trade of the speculators and

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[2] Richard Reisch, "Uber das Wesen und die Wirkungen der Borsenkredite," *Bankarchiv*, XXVIII, 1929, p 13 (of the offprint)

[3] Reisch, "Ruckwirkungen der Borsenspekulation auf den Kreditmarkt," *Zeitschrift fur Nationalokonomie*, Vol I, Vienna 1929, p 209

[4] Cf also Harold L Reed, *Federal Reserve Policy, 1921-1930*, New York 1930, p 150 "Only increases in security turnovers permanently sustained represented unmistakably 'absorption' of bank funds."

are traded from one to another among them as they see fit Suddenly a speculative movement sets in and induces investor X, who perhaps borrows from his bank for the purpose, to buy 50% of the volume outstanding of the A shares, which in consequence of his demand rise in price by 10%, for $550,000 The sellers who, in view of the boom sentiment, wish to speculate further, use their sales proceeds to buy up the B shares, whereupon the sellers of the latter again proceed to buy up the C shares and so on The prices of all these shares naturally rise in consequence and cause the operators on the stock exchange to borrow from the banks to meet the higher prices and/or to facilitate an increase in their holdings of newly issued shares As these purchases always take time to conclude (from settlement to settlement) and also take place one after the other (A buys from B, B from C, and so on), and continue indefinitely, it is clear that not only the new funds used to purchase shares by X, but other credits besides may be taken for stock exchange transactions without any immediate reflux into the economic system "[5]

Reisch does not deny here "that the proceeds of the sale of shares by a speculator who withdraws from the speculative market, finally flow back into the economic process,"[6] but at the same time he holds "that it may take a long time—months or even years—before this happens The argument shows convincingly that stock-exchange operations may temporarily tie up capital and use credit which is not immediately put back into the economic system "[7]

[5] Reisch, "Ruckwirkungen," p 208

[6] *Ibid*, p 207

[7] *Ibid*, p 208 Similarly H L Reed, *op cit*, p 162 "If credit dispatched to the street participates in a large number of security turnovers, a considerable period of time may intervene before the credit returns to an industrial or agricultural use " Professor Reed adds however "But the volume of security turn overs does not by itself prove any withdrawal of bank credit from other demands "

The subsequent analysis will show that there *are* situations in which a temporary locking-up of money capital may take place, but that certain special conditions have to be fulfilled before such situations can exist

26 In the example above, the allocation of new money capital to the purchase of old securities was said to have led to a rise in security prices and a retention of the money capital in security transactions It is sometimes supposed that the rise in the level of security prices can be taken as a sure symptom of the tying-up of capital in security transactions This, however, is not so A rise in stock prices can take place without there being any money capital on the scene

No additional money capital is necessary for a rise in security prices

If A, B, and C are holders of different shares and A suddenly buys B's securities at a price of 110%, B acquires C's, and C A's, all at the higher price, no new money capital is needed to carry out these transactions Again, if the securities initially held by A, B, and C are bought by bull speculators or investors X, Y, and Z at prices of 120%, there is still, according to the argument of section 17, no necessity for an additional tying-up of money capital

It seemed important to refer once more to this circumstance that, with or without changes in the person of the holder, a rise in security prices can occur without any increased use of money capital Cassel has laid particular stress on this fact and was convinced that there would be general agreement with his simple exposition [8] Indeed, so far as the scientific discussion of the problem is concerned, it is fairly commonly

[8] Gustav Cassel, "Does the Stock Exchange Absorb Capital?", *loc cit*, p 21

acknowledged that the rise of security prices *per se* can never be proof or a symptom of the tying-up of money capital

Hence, higher security prices are no proof or symptom of a tie-up of money capital

27 Granted that security speculation *need* not tie up capital, we still have to consider whether it *may* not do so We are not here discussing the case of bear sellers who let the proceeds of their sales lie idle The discussion is for the time being limited to the case which Reisch and most other authors regard as the critical one the case of continually repeated bull transactions [9] We may then ask what are the conditions requisite for a tying-up of money capital?

Three conditions are necessary for a tie up of money capital in security transactions —

One of the necessary conditions appears to be connected with the mechanism of payment The very highly developed settlement technique of stock exchanges introduces conditions that are quite different from those created by the methods of payment used in other markets If all security transactions came within the clearing arrangements of the stock exchange, and there were no transactions other than those between people who take part in the clearing procedure (brokers and jobbers), then the possibility of the tying-up of money capital would be excluded on purely technical grounds which we shall examine in Chapter VI For the time being, however, we shall assume that transactions are carried on with cash (coin and notes) or cheque payments The appropriateness of this assumption becomes clear when it is remembered that the settlement procedure of the stock exchange is restricted to the narrower circle of operators and that transactions between the public and the brokers are completed with the ordinary methods of payment

—first, that transactions are completed with cash or check payments,—

[9] Continually repeated bull transactions take place when the holders of any particular securities estimate the prospects of a price rise in other securities more highly and so sell theirs in order to buy other securities

—second, that credit is made abundant,—

A second condition which must be fulfilled if there is to be a tying-up of money capital concerns the extent of credit facilities The volume of credit must have exceeded a certain magnitude—a magnitude which can only be surpassed under conditions of an "easy money" policy—before the bull sentiment of single individuals can develop into a general bull movement

—third, that security sales by industrial producers lag behind the afflux of new funds

A third condition is that the new issues of industrial shares, and sales of old stocks by people who withdraw from the stock market, are not forthcoming to a sufficient extent, as compared with the flow of money capital to the stock market It has already been pointed out that the critics of security speculation think that capital is absorbed in unproductive uses only in the case of transactions in old securities, since they do not doubt that when new issues are purchased the capital flows into industry Now, is it likely that new capital issues will lag behind the flow of money capital onto the stock exchange? How does the demand for money capital by productive enterprises link up with the flow of capital onto the stock exchange? These are the first questions to be dealt with

Higher stock prices call forth new issues

28 Whereas a rise in security prices is no proof that an increased amount of money capital is being employed on the stock exchange, an increased flow of money capital on to the stock exchange always leads, other things being equal, to higher security prices The rise in security prices in turn gives an impetus to new issues It is obvious that the best time for corporations to raise new capital is at a time when the stock market is firm, thus showing that there is likely to be a ready sale for new securities If security prices have risen to such an extent that a chance to issue shares above par is offered, such a chance is not likely to be missed

The issue of shares at higher prices means a corresponding reduction of the cost of borrowing to the firms concerned If, for example, a firm has to pay 5% on the capital it borrows, the possibility of issuing new shares at 110% of their face value means a lessening of the cost of using capital by about ½% on the capital and by about 10% on the capital charges [1] Higher share prices mean, *ceteris paribus*, cheaper credit for issuing corporations Is it likely that this cheaper industrial credit will fail to find "takers"? In normal times, or in times when entrepreneurs are inclined to be optimistic, there can be no doubt that the demand for long-term capital is not too inelastic (Some writers deny this, but there is little evidence to support their view) A flow of money capital onto the credit market leads to a fall in the interest rate until there is sufficient demand, at the lower interest rate, to take up the funds being offered on the market On the securities market the same process takes place through movements in security prices, so that when there is an increased supply of money capital, the corresponding increase in the amounts demanded appears in the form of new issues [2]

The industrial demand for money capital is normally not too inelastic

We saw in Reisch's schematic example how the money capital flowing onto the securities market competed for existing shares In consequence of this competition the prices of these shares rise so that, *ceteris paribus*, they yield a correspondingly reduced return This will most likely lead to an offer of new securities on the market or, that is, to a demand for the new and cheaper money capital, just as

[1] If we suppose that the firm obtains $110 for $100 par value and it pays a $5 dividend on this share, the effective interest rate is only 4 55%.

[2] Cf John Maurice Clark, *Strategic Factors in Business Cycles*, p 59 "The strengthening market makes the issue of new securities more attractive, at the same time that reviving confidence and business activity increases the desire and need of corporations to obtain increased capital by new issues "

happens on the market for direct credit when an increased supply of money capital competes for borrowers and in this way pushes down the interest rate One may argue that at lower interest rates people desire to hold higher idle cash balances, i e , that they will prefer increased liquidity for speculative motives The discussion of this argument is reserved for a later chapter But no one would argue that an increased supply of money capital on the credit market will simply be tied up in an endless chain of transactions that one capitalist will merely take over the loan made by another Such an argument would imply that a fall in the interest rate fails to lead to an increase in the amount of credit demanded, and that the new money capital only takes the place of previous loans, which in turn replace other loans, and so on, and so forth The new money capital would indeed be tied up in an unproductive use, since it would only proceed through a series of credit transfers instead of finding new borrowers This hardly sounds like a description of anything that is normal, either for the case of funds offered in the form of direct loans or for the case of funds which go into the purchase of securities (Since we are here discussing a rise in the stock market, we are not concerned for the moment with the low elasticity of demand for money capital which is a feature of times of depression)

Additional outlets for new money capital will be found without time taking solicitation among old borrowers

The effect of a livelier share market in calling forth offers of new shares is an undeniable fact to which every business man will testify It may even happen in the course of a speculative movement that the supply of new shares outstrips the supply of new money capital after a series of new issues has been successfully placed, a time comes when further issues "fail," and the banks have to discourage further flotations because the stock exchange is not capable

New issues may even outstrip the additional supply of money capital

of taking up any more This is a sign that all the money capital flowing onto the stock exchange has already found its way into industry The stock exchange credits are, then, not tied up in "speculative business" but have (except to the extent that a larger amount of cash is being held by the nervous bears) found their way onto markets for consumers' or investment goods

29 In order to guard against renewed objections that the arguments advanced here pay insufficient attention to the time-factor, it is worth while recalling that in all causal connexions which are analysed by economic theory certain time-lags are presupposed "The idea of causality is inseparable from the idea of time "[3] The investigation of the "problem of determining the time-coefficients"[4] is at present only in its infancy There is, however, reason to believe that the error involved in assuming that the time-coefficients can be neglected is considerably less in those markets which we are accustomed to call speculative markets than anywhere else in the economic system [5] Moreover, the problem of the length of the lag (if it exists) between a sudden increase in the flow of money capital on to the stock market and the increase in the flow of money capital through security issues into production is further simplified by the fact that stock exchanges have the character of forward dealing markets—whether these forward dealings are carried on openly or in the disguised form of lending transactions In many cases an order for the purchase of shares will be given at a moment when the purchaser

Time frictions are generally less important on security markets than in the sphere of production

[3] Carl Menger, *Grundsätze, loc cit*, p 21

[4] P N Rosenstein Rodan, "Das Zeitmoment in der mathematischen Theorie des wirtschaftlichen Gleichgewichtes," *Zeitschrift für Nationalökonomie*, Vol I, Vienna 1929, p 132

[5] *Ibid*

does not yet have the funds available but is anticipating having them available at a somewhat later date Thus the mechanism through which the increased supply of money capital—in so far as it is not compensated by spontaneous unloading by temporary holders of old securities—produces a corresponding rise in the quantity of capital demanded, may be set going in advance

The velocity of reaction of the stock market is relatively high

An attempt to demonstrate the speed of reaction of the stock market by statistical time series is made in the Appendix There the time series for stock prices and new issues are set forth side by side The result seems to bear out the theory that the issue of new shares follows immediately the rise in share prices, and that therefore the quantity of shares offered rises as soon as an increase in the demand for shares is perceptible, or in other words that the quantity of money capital demanded increases as soon as there is a noticeable increase in the supply of money capital

New stock issues follow quickly the rise in stock prices,—

This does not however prove all that had to be proved in order to controvert the argument that a temporary "absorption" of money capital takes place Even if the velocity of reaction were so great that no time at all elapsed between the rise in stock prices and the new issues, the extent of the reaction might still be too small The resultant reaction might, for instance, only conduct half or even less than half the flow of new money capital into industry The fact that the reaction sets in immediately does not prove that there can be no lag between the offer and the taking up of the total amount of capital suddenly appearing on the stock exchange in search of investment

—but immediate reaction does not prove absence of lag because new issues may not absorb all the money capital supplied

30 We must not deny, therefore, that our "third

condition" (the lack of a corresponding demand for the new money capital) may prevail in certain circumstances It has to be admitted that situations may arise in which new issues do not come forth to the same amount, or at the same speed, as the flow of new money capital onto the security market Such is the case when a quick and large increase in the supply of money capital (i e, the demand for securities) occurs, then the demand for money capital (i e the supply of new securities) may not keep pace The lag of issuing activity behind the flow of capital onto the securities market would, however, not of itself justify the presumption that part of the money capital is not flowing out into production, since the balance might be finding its way into production through the realization of old security holdings by producers It is quite conceivable that in times of increasing stock market activity, firms which have been holding their own or other securities may decide to sell them and use the proceeds for productive purposes (Cf above § 20) And it is most probable that another part of the money capital that has flowed onto the stock market will make its way, through the realization of security holdings by profit takers, to the markets for consumers' goods (Cf above §§ 18 and 19)

Deficiency of new issues, however, is no proof of lag, since producers may sell old security holdings

A situation in which the realization of temporary security holdings together with new issues of productive enterprises lag behind the increased supply of money capital (as according to our "third condition") can be explained only in terms of an *excessive* supply This excessive supply is likely to arise only if the natural sources of money capital—new savings plus replacement funds—are augmented by a large volume of capital from the "less natural" sources of created

"Inflationary" credit supply may account for excess of supply over quantity of money capital demanded through industrial stock sales

bank credit (and dishoarded funds) [6] Since the extension of these sources of money capital, especially the expansion of bank credit, involves a reduction of the rate of interest charged by the banks below the natural rate,[7] our "second condition" makes its appearance It is only if credit is offered at a rate of interest below the natural rate that the stream of money capital flowing onto the market will reach such proportions that it cannot be taken off fast enough by investment expenditures of industry and consumption expenditures of profit takers If we picture the process in terms of an "inflow" and "outflow" of money capital, it will appear that there is a temporary "damming up" of money capital in basins created by stock exchange speculation [8]

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[6] The final result is the same, but the timing of the forces some what different, in the account given by John M Clark, "An Appraisal of the Workability of Compensatory Devices," *American Economic Review*, Vol XXIX, supplement 1939, pp 205 206 ' We may assume that four billion dollars flow into the securities markets seeking investment, while only three billions flow out through the issuance of new securities for the purchase of capital equipment The natural result is a rise in the prices of out standing securities Some of the profits would be taken out to be spent for consumption and some would be reinvested, tending to a continued rise

"But this is not all, since credit funds as well as savings flow into the markets, thus adding to the original one billion of excess funds seeking investment Then prices of securities may not be stabilized until two or three billions instead of one billion have been taken out and used for consumption In that case, an excess of savings would have been converted into an excess of spendings, and production, instead of being depressed or stabilized, would be stimulated "

[7] By "natural rate of interest" I understand the rate of interest at which the total amount of credit demanded is equal to the sum of the proceeds of current intended net savings and current allocations to replacement funds (in the broadest sense) minus any spontaneous disbursements of cash holdings plus any spontaneous building up of cash holdings, after adjustment for any changes in the coefficient of transactions

[8] This "damming up" would show itself in the form of increased cash holdings (checking accounts) of persons participating in stock exchange operations It would be interesting to conduct a statistical investigation of the subject, but at present the necessary information is lacking

31 In examining the conditions of a possible temporary tying-up of money capital in security speculation, we have seen that the "third condition" (a temporary lag of the increase in the amount of money capital demanded behind the increase in supply) is bound up with the simultaneous existence of the "second condition" (increase of the supply through bank credit) The "first condition" (the partial absence of the special technique of payment used on the stock exchange) is also closely associated with this second condition

As will be shown later, the settlement procedure adopted by stock exchange members renders any considerable use of media of payment (in note or deposit form) unnecessary If professional speculation involves no "damming up" of media of payment, it involves, of course, no "damming up" of money capital either But the case is not the same where speculation by the public is concerned The highly developed clearing facilities apply to business between one broker and another, and not to business between the brokers and private speculators who are not members of the exchange The latter have to make payment in actual media of exchange (by drawing on a checking account) when they buy securities, and to be paid in media of exchange when they sell securities We shall see later that the habit which prevails in America, for the private speculator to leave the proceeds of security sales with his broker if he intends to continue his speculation, makes such payments unnecessary But where the broker habitually pays out the sales proceeds to his customers, speculation by the outside public is associated with the use of media of exchange Usually, however, extensive speculation by the public only sets in when the development of bull sentiment among them is backed up by an increase in the supply of bank money

The stock exchange clearing is limited to stock exchange members

Payments between brokers and private speculators may involve cash or bank deposits—

—except if private speculators continue trading by means of brokerage deposits

Speculation by the genera public thrives only on abundant credit

This argument that persistent bull speculation by the general public cannot develop, no matter how optimistic a frame of mind they may be in, unless they have the funds put at their disposal, will be explained further in Chapter VI Although the previous analysis will have sufficed to show that stock exchange speculation is likely to tie up money capital only when there is an expansion of bank credit, the chain of reasoning will not be complete until we have examined the mechanism of payment on the stock exchange and of brokers' loans Before proceeding to this topic, however, we will take up the question of stock exchange losses

CHAPTER V

THE LOSS OF CAPITAL IN STOCK EXCHANGE SPECULATION

32 While it is perfectly clear that an individual capitalist or speculator may make losses on the stock exchange, it is very doubtful whether "society" can make such losses We are not, of course, referring here to the losses of one society to another, for instance, to the losses which the inhabitants of any particular country may suffer in respect of investments or stock exchange operations abroad The question with which we are concerned here is whether an individual's losses from domestic stock exchange transactions represent a loss to the society to which that individual belongs [1] Before we answer this question we must, however, investigate the causes of stock exchange losses

It is questionable whether stock exchange losses of individuals represent losses to society

A holder of shares suffers a loss when the shares depreciate in value this may be due to (a) damage or destruction of the real capital of the enterprise, (b) a fall in the prospective profits of the enterprise, (c) consumption of the capital of the enterprise, (d) a rise in the rate of interest at which the profits have to be capitalized, (e) a misdirection of investment by the enterprise, (f) a reaction to a previous speculative over-valuation of the shares

There are several reasons why stock prices may fall —

From the standpoint of the "community as a whole" these various causes merit different judgments

(a) When real capital is damaged or destroyed there is undoubtedly a loss of social capital The fall in the

—real capital may have been damaged,—

[1] Cf R G Hawtrey's verdict in *The Art of Central Banking*, p 83 "What one man loses, another gains The individual changes of fortune may be great, but they have no more economic significance than those which arise from baccarat or betting"

price of the shares is not, of course, an additional loss, it is simply the way in which the loss to society is expressed on the market

(b) The fall in the profitability of the enterprise may have various causes If the demand for the product of the firm declines and the reduced selling price of the product diminishes the firm's receipts, then the investment of capital in the particular line of production concerned may turn out to be unjustified, in any case the fall in value of the firm's capital simply represents an adjustment which is expressed by the market in the form of a fall in the price of the shares The same is true when competing concerns using improved technical methods are able to push down the selling price of the product The fall in the profits of the firm using the old methods and the reduction in the value of its shares will be more than compensated by the profits of the up-to-date firms and the gain to consumers, thus it cannot be regarded as a loss to society Profits may be impaired by a rise in the prices of certain necessary means of production, such a price rise may be caused by a competing demand for these factors by other, more promising types of employment In this case the fall in profits is not to be regarded as a loss to society If, however, the decline in profitability is not due to an economic process of adaptation or development, but to some "harmful" interference from outside, then we may say that there is a social loss of which the market takes cognizance through the fall in security prices

(c) The consumption of a firm's capital may be due to wrong accounting methods, bad tax laws, or bad business practices, which result in the distribution or taxation of "fictitious" profits To meet these disbursements the firm either uses up part of the necessary replacement funds (e g , it makes inadequate allowance

for depreciation) or it raises new capital (it waters its share capital or contracts new debts) In these cases the fall in share prices obviously signifies a diminution of social capital

(d) A rise in the rate of interest must, if the productivity of the enterprise is unaltered, cause a reduction in capital values and consequently a reduction in share prices If the rise in the interest rate is due to a shortage in the supply of capital, it may be considered disadvantageous from the collective standpoint, if it is due to an increased demand for capital arising out of technical progress, it may be regarded as beneficial from the collective point of view The fall in share prices does not, therefore, permit the inference that a loss to society is involved

—the interest rate may have risen—

(e) A misdirection of investment, i e , the use of money capital for the creation of real capital which yields a return below the marginal productivity of capital in general and is therefore unprofitable, is equally "regrettable" from both the private and the social point of view Since over-speculation on the stock exchange has sometimes been deemed a cause of misdirection of investment, this point demands special attention

—investment may have been mis directed—

(f) The losses ensuing from the reaction of the securities market which is bound to occur sooner or later if prices have been driven "too high" by speculation, are what people usually refer to when they speak of "stock exchange losses," and are the target of their most vehement criticism These losses, however, are exclusively shifts in the distribution of wealth and of income they do not in themselves represent any loss to society This point is not clear even to many trained economists and probably needs to be explained in greater detail

—speculation may have driven stock prices too high

Although cases (a) to (d), and others of a similar kind, undoubtedly represent losses to the owners of the securities, they are not losses specifically connected with stock market operations, since the cause is in each case on "the commodity side" and the changes in the share prices are merely a reflection of economic events in the sphere of "real goods" The only relevant cases for our purposes are case (e) which raises the problem of whether security speculation causes misdirection of investment, and (f) which raises the problem of whether security speculation can cause capital to be lost in the actual speculative transactions themselves

33 For the moment we will postpone discussing the question of misdirection of money capital, in this chapter we will try to show that money capital cannot be lost in the transactions connected with security speculation This is not difficult It would be much more difficult to explain why many an economist has gone astray on this point The argument that the money capital which flowed onto the stock exchange might be "held up" for a certain length of time undoubtedly made sense The idea that money capital can be lost on the stock exchange seems, however, to make scarcely any sense at all

If we reproduce the arguments used by Professor Reisch, we shall see how a rather obvious error led this well-known author to jump from his statement that the sales-proceeds of shares "do not always flow back into the economic process," to the statement that they "may be used for speculating on the stock exchange and perhaps be lost there"[2] Reisch describes the course of events as the result of which "some part of the capital contributed is in

[2] "Ruckwirkungen," p 209

danger of being lost" in the following way[3] "The share prices had reflected unreal (artificially high) values, they were soap bubbles which, when the speculative movement ceased, knocked into each other and burst, leaving only a small foundation of real value On the speculative market a long series of business transactions are concluded but only the balance flows into the economic process"

Reisch here takes a more radical position than he did in his first article on the same subject[4] There he still held the opinion that with the cessation of the stock exchange boom the monetary media which had been used and had of course represented money capital, "become available again for use in other spheres of economic activity The gains and losses of the speculators are for the most part[5] of no significance to the community as a whole, since though they cause shifts in the relative wealth of the participants in the speculative operations, they do not change the wealth of the community as a whole" In his second article, however, Reisch holds that, in addition to the shift in the distribution of capital ownership, there is a capital loss to society When stock prices break, so he reasons, "the lower selling price of the speculators is, it is true, balanced by the lower buying price of the buyers, who may be assumed to be outside the speculative market, but the speculators have lost both the gains which they made in the boom and part of their original capital, and in some circumstances they may not even have the wherewithal to pay back the loans they borrowed from the banks, so the banks which have

—and that in addition to a shift in the distribution of capital ownership, capital might be lost to society

[3] *Ibid*, pp 207 ff

[4] "Uber das Wesen und die Wirkungen der Borsenkredite," *loc cit*, p 14

[5] The statement was qualified to allow for the gains of foreigners

obligations to meet and now cannot obtain the expected equivalent (repayment by the speculators out of the proceeds of security sales) may suffer losses on their assets This should suffice to show," so Reisch concludes, that, in addition to the temporary tie-up of capital and credit, "price changes may occur on the stock exchange which make it questionable whether the capital and credit will flow back even later "[6] This "capital and credit," which must have been represented by circulating media, thus disappears without leaving a trace It has obviously ceased to be tied up after the speculative boom has come to an end, and yet, so it is contended, it has not "returned" to the economic system—it must then have completely disappeared

The reason why the attempt to trace the lost money capital was in vain was that the only persons followed up were the persons who last acquired the shares at a low price, the speculator who sold at a loss, and the creditor who might suffer as a result of this loss But one does not have to be a very good detective in order to reason out that the speculator who sold at a low price lost because he had bought previously at a high price, and to discover, thus, that the money which is being searched for must have gone to the person who sold at a high price, or to use the jargon of the stock exchange, to the person who "got out in time "

No reader of this book will, I hope, make the mistake of thinking that nobody or only very few people manage to "get out in time " There are two parties to every transaction, so to everybody who bought at a high price, there must correspond somebody who sold at this high price, and who then stopped speculating and so was the lucky recipient of the money capital which was believed to have been lost

[6] "Rückwirkungen," p 208

Some arguments about stock exchange losses contain a mixture of ideas which are confused

34 Arguments concerning the losses which society is supposed to suffer as a consequence of stock exchange losses usually consist of a confusion of a number of different ideas Among these are the following (1) real capital is lost, (2) money capital is lost in the sense that sums of money which would have flowed onto the markets for producers' or consumers' goods fail to do so, (3) money capital is lost in the sense that sums of money which would have been available for productive investment are diverted into the channels of consumption and thus flow onto the consumers' goods market instead of onto the producers' goods market, (4) money capital is lost in the sense that bank credit which was granted for purposes of speculating on the stock exchange cannot be repaid and thus fails to return to the banks The last quotation from Reisch is evidence that this confusion prevails and no doubt many more examples could be cited

—and self contradictory

Many of these ideas are, however, inconsistent with one another On the one hand stock exchange losses are accused of having deflationary effects (No 2), while at the same time it is feared that, as a result of stock exchange losses, bank credits will not be repaid to the banks (No 4) But what does this last effect imply? It means that the economic system remains more amply provided with circulating media than would have been the case if the credits had returned to the banks Let us assume a case of a very heavy stock exchange loss Suppose that the banks have created credit in order to provide a number of speculators with funds for buying shares which later turn out to be worthless The unlucky buyers of these shares have transferred their deposits to lucky sellers of the shares, and the former are therefore

unable to repay their debts to the banks In short, the stock exchange losses in this case prevent the "deflationary" effects which the repayment of credits may possibly have, if they are not repaid, the bank deposits remain in existence, whereas if they are repaid they are, temporarily at least, destroyed

This (slightly frivolous) manner of reasoning serves to show the danger of carrying arguments to extremes and the need for exercising very great caution in analysing economic problems If we make the argument even more extreme, we obtain quite different results if the failure of the speculators to repay their loans caused the banks to get into such difficulties that they had to close down, then the immediate result would be the destruction of all their deposits In this case the failure to repay bank credits would be more deflationary than their repayment [7]

35 In other cases also it can be shown that, theoretically at least, the exact opposite of the expected and feared results is conceivable Let us take the case of a reduced capital supply due to the consumption of gains made on the stock exchange (No 3 in the list of interpretations given above) We have already referred to this case in Section 18 The money capital employed to buy shares comes into the hands of the seller, and if he chooses to look upon part of this money capital as profit and uses it for consumption purposes, then the funds available as money capital are reduced in favour of the funds used for consumption

At first sight it may seem paradoxical to argue that

[7] Incidentally, "the losses to banks on brokers' loans have been extremely slight It might even be true that of all banks' assets, brokers' loans have been the soundest in this depression from the banks' point of view " Rufus S Tucker, "Government Control of Investment and Speculation," *American Economic Review Supplement*, 1935, Vol XXV, p 146

losses on the stock exchange are capable of resulting in an increase of money capital The conditions necessary for this to take place are, however, not at all unreal All that is necessary is that the seller should cover his losses out of his income by restricting his consumption Let us take the case of an occasional speculator who borrows from his bank to gamble on the stock exchange and buys securities at high prices The fortunate seller—it may be another speculator or it may be a corporation which has just floated a new issue of shares —receives the full amount of the money capital, the unlucky speculator later sells out at low prices and so receives less from the new buyer of the shares than he himself had paid previously If he now makes up the deficit on the debt he owes to his bank by reducing his consumption, thus saving a part of his current income, and if the banks reinvest the repaid amounts, the stock exchange loss will have resulted in real capital formation As the individual concerned would not otherwise have decided to save, we might call it a case of involuntary saving induced by stock exchange losses (If, however, the "make-up savings" of the losers are not invested, deflation results Incidentally, this outcome is the more probable owing to the pessimistic attitude which follows heavy losses)

—likewise money capital may be increased if stock exchange losers reduce consumption and if these savings are invested,—

Again, short-term savings may be involuntarily converted into long-term savings as the result of losses made on the stock exchange If A is saving for something that he intends to consume at a later date (such as a long journey or the purchase of an automobile) and invests these savings for the time being in shares, he makes his temporary savings available for the creation of real capital If, after having bought the shares at 100, he fails to find a buyer who will take them at this price, and finally has to sell them to another saver, B, at 80, then 80% of the money capital invested in the real capital will have been provided

—likewise the stock exchange losses of temporary savers reduce dis saving and thus increase the net supply of money capital

out of B's savings and 20% out of savings which have been involuntarily sacrificed by A Although A merely wanted to invest his funds temporarily, he was unable to withdraw them from the productive process, and so the loss he suffered on the stock exchange became long-term savings of the economic system

We have no way of telling how important quantitatively the savings induced by stock exchange losses in practice are Presumably they are considerably less than the figure for consumption of gains made on the stock exchange But the principle is significant, that the consumption of savings induced by stock exchange gains does have a counterpart in the formation of savings induced by stock exchange losses In the one case the speculator looks upon his gains as an addition to his income and *increases* his consumption, and in the other case, the speculator considers his losses as a diminution of income and *reduces* his consumption In so far, however, as these gains or losses are regarded not as changes in income but as changes in wealth, they represent merely interpersonal shifts in wealth, which may be connected with the valuation of capital but have of themselves nothing to do with the formation or consumption of capital

CHAPTER VI

THE DEMAND FOR MONEY BY THE STOCK MARKET

36 In this chapter we shall carry out the promise made on several occasions in previous chapters to analyse our problem more closely from the standpoint of monetary theory

First of all, we must examine the argument that the stock exchange takes money, or circulating media, away from other markets This argument is advanced even by authors who disagree with the thesis that capital is tied up on the stock exchange It goes without saying, of course, that those who defend the theory of the tie-up of capital implicitly hold that purchasing power is tied up

It is held that the stock exchange takes circulating media away from other markets,—

According to Reisch, there is "no doubt whatever"[1] that circulating media are tied up by stock exchange transactions and are released when the stock exchange boom comes to an end [2] His view has been very neatly put by H von Beckerath in the following sentences "The money which is withdrawn from expenditure on the markets for goods and labour, and used as unit of account for business on the stock exchange, leads to a temporary reduction in the demand for goods and for labour This is to say that the money is held up

[1] "Uber das Wesen und die Wirkungen der Borsenkredite," *loc cit*, p 13

[2] *Ibid*, p 14 "It is only when the stock exchange boom breaks and comes to an end that the circulating media become available again for use in other spheres of economic activity" Reisch did not see that it is precisely when the boom breaks that an "absorption" of circulating media may possibly take place due to the hoarding of sales proceeds by pessimistic sellers of shares

on its way and for the time being can neither be spent nor lent in the economic process proper "[3]

The idea, then, is that the demand for other economic goods is reduced in favour of the demand for securities It is a fairly generally held opinion that by exerting a "demand for circulating media," the securities market comes into competition with other markets Balogh, for instance, says that "circulating media move from one market to another but are 'held up' on each of them for some short or long interval of time "[4]

He speaks of a "circulationary tie-up"[5] to indicate that circulating media are held up for a particularly long time on a rising stock market Palyi, famous for his sharp wit and tongue, also finds, in an analysis of American conditions, that "the remainder of the circulating media were used to purchase securities and real estate and were until recently tied up in these uses"[6], he thinks it necessary to add somewhat scornfully in parentheses "There is a new-found theory which holds that the stock exchange never ties up capital even in the short run, but that the money paid in the morning flows out into the 'economic system' in the evening in order to return to the stock exchange the following morning no account will be taken of this ingenious theory here " Nor will any account be taken here of this ingenious method of criticizing the caricature of a theory

In so far as the argument concerns not the provision

[3] Herbert von Beckerath, *Kapitalmarkt und Geldmarkt,* Jena 1916, p 162

[4] Thomas Balogh, "Latente Inflation, Währungssystem, Notenbankpolitik und Börsenhausse," *Schmoller's Jahrbuch fur Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reiche,* 53rd year, 1929, p 591

[5] *Ibid* , p 596

[6] Melchior Palyi, "Zinsfuss und Zahlungsbilanz in den Vereinigten Staaten," *Magazin der Wirtschaft,* 5th year, No 45, Berlin 1929, p 1687

of capital but the provision of circulating media, Cassel (at whom Palyi's ironic comments were aimed) also inclines to the view that the securities market competes for circulating media with the rest of the economic system This is apparent from Cassel's remark that when the demand for money by the stock exchange rises the commodity price level can be kept stable only by the creation of new bank money "We must therefore," he says, "come to the conclusion that, if the Stock Exchange should require an increase in the amount of money in circulation, the increase can and should be made by the creation of new means of payment in proper adjustment to the aim and view this money will doubtless consist mainly of bank credits on *cheque* account In this case the amount of money available for industrial and commercial purposes will remain unchanged, and the general level of commodity prices can thus be kept constant Hence, providing that the bank policy is as rational as has been assumed the Stock Exchange cannot, in this case either, have a disturbing effect on the amount of money available for industry and trade "[7] If this proposition is correct, then, in the absence of a "rational" banking policy and under the assumption of "other things being unchanged," the demand for money by the stock exchange *will* "have a disturbing effect on the amount of money available for industry and trade "[8] By "disturbing effect" is meant, of course, a fall in the commodity price level or, more generally, a decline in demand on the markets for commodities Despite the astonishing unanimity among the various authors on

—and that new bank money should be created as the stock market demands more money

[7] Gustav Cassel, "Does the Stock Exchange Absorb Capital?", *Skandinaviska Kreditaktiebolaget*, 1929, pp 23 and 24

[8] Cassel lessens the importance of his statement in the very next sentence where he adds that "moreover it is by no means certain that a rise of prices and greater animation of business on the Stock Exchange would necessarily result in the need of additional means of payment "

this point, the correctness of the assumed causal nexus "rising stock market falling commodity markets" may still be questioned

37 The conception of a demand for circulating media by particular markets is, in my opinion, not always a very fortunate one The same can be said of Balogh's assumption of the "temporary deflationary effect of the stock exchange boom "[9] If higher prices and an increased turnover on one market tie up more purchasing power, there is, according to such reasoning, a consequent deflationary effect on other markets If we use this form of expression, we have therefore to say that an increase in prices or sales on the fruit market causes a deflation on the fish market

If the demand for fish falls off in favour of the demand for fruit, then, if other circumstances remain the same, fruit prices will certainly rise and fish prices fall But it is no explanation of this price shift to say that "an increased demand for circulating media on the fruit market has a deflationary effect on the fish market " It is self-evident that if there is a shift of demand from one commodity to another, and purchasing power is used to buy another commodity in place of the one previously preferred, the price of the one for which the demand increases will rise at the expense of the price of the one for which the demand declines Can it be inferred from this that increased interest in securities must raise the prices of the latter at the expense of the prices of commodities?

When someone wishes to acquire securities and obtains the funds necessary for the purchase by refraining from buying things that he previously used to consume, the consequent shift in demand is called "saving " The savings process represents (if no hoarding is involved) a shift in demand from present

[9] *Loc cit*, p 592

goods to future goods, and leads, by way of the corresponding shifts in prices, to shifts in production. It is usually assumed that a significant price shift takes place not only between consumers' goods and securities but also between consumers' goods and producers' goods. It may seem strange that the price fall in consumers' goods should correspond on the other side to price rises in *two* categories of things at the same time. But there is nothing complicated about this, for the rise in price of *titles* to capital goods may actually involve the rise in the prices of the *capital goods* themselves.

Consumers' goods fall in price: can both securities *and* producers' goods rise correspondingly?

Those who are accustomed to think in terms of a constant velocity of circulation of money will probably not find this explanation easy to accept. According to their view money (under which we include bank deposits on current account) performs a fixed number of transactions in a given period of time and the price level is determined by the turnover of goods, the quantity of money, and the fixed velocity of circulation. The velocity of circulation is accordingly not conceived of as a dependent variable. Our reference to the shift in demand from consumers' goods to capital goods, however, implied "additional transactions"—the purchase of securities—and those who adhere to the theory of a "constant" velocity of circulation will reject the argument according to which the titles to capital goods (securities) as well as the actual capital goods rise in price.

No—if the transactions velocity of circulation is constant,—

There are other authors, however, who assume not a constant transactions velocity of money but a constant income velocity or circuit velocity. These authors will find no difficulty in accepting the proposition that security prices and producers' goods prices rise together, and that the supposed causal nexus "rise in security prices — fall in commodity prices" does not hold.

—yes—if the income velocity of circulation is constant.

But any assumptions of this kind concerning the velocity of circulation of money are quite arbitrary It is necessary to ask whether the turnover of securities lengthens the circuit round which money has to flow, and if this is the case, whether the transactions velocity may not rise correspondingly If the first question could be answered in the negative, or the second in the affirmative, then the argument that the commodity price level is independent of the volume of transactions on the securities market would be substantiated

38 The more plausible argument may seem to be that a rise in security prices and an increase in the turnover of securities must lead to a fall in the so-called price level, simply because the demand for money by the securities market and therefore by the economic system as a whole will have risen Given an increased demand for money or circulating media[1] and an unchanged supply of money, it would be difficult to imagine anything else than an inevitable fall in prices The question, however, is whether an increase in turnover of securities, which may be an increase in the number of securities traded or a rise in their prices or both, involves an increased demand for money or circulating media This question is suggested by the fact that the turnover on the security exchange is effected, for the most part, not with the use of circulating media, but by a system of reciprocal cancellation, or, that is, by a clearing process

The introduction of the clearing mechanism into our analysis at this point is essential There is no other sphere of the modern economy besides the stock exchange for which one is justified in arguing that

[1] I have discussed the concept of the demand for money elsewhere See my *Goldkernwährung*, Halberstadt 1925, pp 163 ff

the clearing mechanism may take care of an increased turnover and avoid an increase in the demand for money It was made clear by Mises that we are seldom justified in supposing that an increase in the demand for money due to additional business will be automatically "compensated" by an extension of the clearing mechanism[2] Mises said explicitly "An extension of the clearing system can never be called forth automatically by an increase in the demand for money"[3] Nevertheless it seems to me that stock exchange business, when there is an increased turnover of securities between members of the stock exchange, is a special case which falls outside of this proposition

The stock exchange clearing may obviate an increase in the demand for money

39 The clearing procedure is an almost indispensable part of the technique of operating on the stock exchange With transactions within a more or less closed circle of people, most of the claims can be settled by balancing with counter-claims without the use of money Such reciprocal cancellation will be possible for a major part of all claims even when such procedure is confined to the transactions of a single day The possibility of using this off-setting procedure is greatly extended when the business of several days is brought together in a settlement period This practice is followed on many leading stock exchanges even where there is a legal prohibition against forward dealings and only cash business is allowed

The members of a clearing system settle their mutual claims by reciprocal cancellation

The gross value of the securities traded on the stock exchange never has to be paid either in cash or by cheque, only the *differences* have to be paid Very few people fully realize what an important part is played by this process of off-setting claims against each

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[2] Ludwig von Mises, *The Theory of Money and Credit*, English edition 1935, pp 302 ff

[3] *Ibid*, p 305

other and paying the differences In a book published as long ago as 1905 it was estimated, by one who was well acquainted with the facts,[4] that on the English stock exchange 90% of the obligations were settled by off-setting and only 10% were paid by means of bank cheques

A passing reference may be made here to Albert Hahn's treatment of the whole problem of stock exchange credit In Hahn's view, the main problem is whether or not the stock exchange absorbs money in the narrower sense, i e , *cash* "The purchase of securities, the so-called stock exchange turnover, as such takes place almost exclusively *without the use of cash* and therefore exerts scarcely any effect on the credit market"[5] The transaction of stock exchange business without the use of cash is an essential element in Hahn's theory of credit As he regards the demand for cash as a decisive factor in the determination of the rate of interest,[6] he attributes more importance to the absence of the use of cash in stock exchange operations than most other authors When we say here that the turnover of securities need not involve any increase in the demand for money or circulating media, we mean not that it requires only bank money and no cash, but that the major part of the stock exchange turnover requires neither the one nor the other The off-setting mechanism makes it possible very largely to dispense with both cash and bank money

40 These considerations do not, however, exclude altogether the possibility of a rise in the demand

[4] Edgar Jaffé, *Das englische Bankwesen*, Leipzig 1905, p 95

[5] Albert Hahn, "Borsenkredite und Industrie," *Frankfurter Zeitung*, 9th May, 1927, No 341

[6] See especially Hahn, "Zur Theorie des Geldmarktes," *Archiv für Sozialwissenschaft und Sozialpolitik*, Vol 51, pp 289 ff

for money during a stock exchange boom Even if only a fraction, let us say 10%, of the turnover on the stock exchange makes use of the monetary circulation (bank deposits of course), then, assuming a constant ratio between the volume of transactions effected by the clearing mechanism and the volume of transactions effected with the use of cheques, an increase in stock exchange turnover would still cause an increase in the absorption of bank money in absolute figures It is, however, not correct to assume that the proportion of the transactions which can be settled by clearing remains constant It will be immediately apparent that when the volume of transactions increases, the possibilities of off-setting are augmented not only absolutely but relatively, and that the balance of the differences which have to be paid is not proportional to the level of transactions

The ratio of cheque payments to total turnover falls as turnover increases

The notion that a rising stock market requires a larger volume of circulating media than a falling market is, so far as concerns the narrower circle of operations, i e , those which come under the settlement procedure, not valid, since falling prices are just as conducive to "differences" as rising prices Since it is only the differences which have to be settled by payment, and differences are of equal frequency on a rising market as on a falling one, the *a priori* assumption that in a boom an increased circulation of money is needed for the purpose of "in-and-out trading" of securities on the stock exchange is unfounded

Rising prices are no more cause for increasing clearing differences than are falling prices,—

The stock exchange turnover may increase by "quantity" or by "value," i e , more securities may be traded at unchanged prices or the same number of securities may be traded at higher prices, and there are of course any number of possible combinations of these factors The proposition that there is no logical necessity for the differences for settlement to rise with

an increase in the turnover figures, holds equally well for a "quantity" or a "value" increase in turnover If a group of speculators undertake a large number of transactions among themselves, the balance which remains to be paid after off-setting need not be greater than it would be if the turnover had been smaller

An increase in turnover will tend to bring with it an increase in differences to be settled by cheque payments only if the increased business is not evenly distributed among the various clearing-house members, or, more correctly, if the unevenness in the distribution of business among brokers is increased by the increased turnover The probability that this will happen in the course of a stock market boom is fairly high for the following reasons (1) brokers are often specialized as to the type of customers they serve, and an increase in trading may find market opinions divided as between these types of customers, (2) different brokers may have different opinions as to expected market developments, and may advise their customers accordingly, so that selling and buying orders are unevenly distributed over the brokers

The sales must, of course, equal the purchases If one half of the brokers served the customers who did the selling, and the other half of the brokers served the customers who did the buying, then any increase in turnover would involve an equal absolute increase in payments for settlement If, however, each broker served both selling and buying customers, the absolute increase in cheque payments would fall short of the absolute increase in turnover If the increase in turnover were such that the distribution of sellers and buyers among brokers remained unchanged, total turnover and payments for settlement would rise in the same proportion If the increase in turnover were such as to make for a more even distribution of buying and

selling orders among the various brokers the amount of cheque payments would fall relatively, and indeed, might fall absolutely All these developments are possible, an inspection of clearing-house statistics[7] shows that in the past the amount of payments for settlement usually rose absolutely but fell relatively with an increase in turnover

Check payments might conceivably fall with increased business,—

—actually they rose for the most part

The absolute increase in cheque payments which may thus accompany rising stock market transactions can be taken care of out of unchanged totals of brokers' cash balances In other words, there is no logical necessity for a rise in clearing balances requiring settlement to cause a rise in the bank balances held by brokers at the close of the day There is almost no statistical evidence available which might show whether, in point of fact, brokers carried larger balances when transactions were larger The reason why they easily could do more business without higher bank balances will become obvious from an analysis of the mechanism of stock exchange loans[8]

Increased clearing balances, however, can be settled without increased bank balances

41 The settlement procedure is open only to actual members of the stock exchange, i e , the jobbers (dealers) and brokers Securities are traded, however, not only between members of the stock exchange but also between brokers and the public It would be a serious error to confine our investigation of the problems connected with the stock exchange to the activities of the professional dealers, since the activity of

[7] See Appendix C, Table XIV

[8] See Chapter VII and Appendix B Cf on this point the lucid discussion by Charles O Hardy, *Credit Policies of the Federal Reserve System*, Brookings Institute, Washington, D C 1932 On p 167 he writes "There is no theoretical limit to the volume of business which can be supported by a given volume of reserves, if substantially everything is liquidated each day before the banks statements are made up As service balances required of brokers do not vary in proportion to their loans, as is customary with commercial loans, there is no theoretical necessity for brokers to increase their average balances as their turnover goes up"

these dealers is directed by the willingness to buy and sell on the part of the public There is an old stock exchange joke which says that no inn can keep going in the long run if the bar-tenders have nothing else to do except play billiards with each other It can exist only if there are customers to serve In the same way the members of the stock exchange live not from "playing with each other," but from the operations which they undertake on behalf of the public A rise on the securities market cannot last any length of time unless the public is both willing and able to make increased purchases But all that was said about the clearing mechanism dispensing with the use of money does not apply to transactions between the *public* and the stock exchange, and we must therefore continue our investigation in this direction

The fact that "inside business" on the stock exchange, as I have tried to show, need not have the effect of tying up more circulating media in times of boom does not mean that "outside business" carried on between brokers and the public may not have this effect

42 The attempt is sometimes made to dispose of the argument that the stock exchange or the speculating public cause a tie-up of circulating media by comparing the process to a "sieve with wide holes" The securities market is supposed to be analogous to a sieve because the sellers of securities obtain the money just as soon as it is invested by the buyers, and the circulating media to a certain extent merely "run through", they remain at the disposal of the whole market without any "tie-up" or "absorption" But this formula could be applied just as well to any other market with the result that money would never be "held up" or "absorbed" anywhere The seller of a commodity also obtains the money spent by the buyer, and it

would be impossible to explain any price shift if we were to argue that the seller might spend the money he received for his commodity to purchase the goods which the person who bought from him had to forgo

Similar views are often to be found elsewhere, as for example, among those who advocate a policy of subsidizing certain groups of producers for the purpose of giving them more purchasing power to spend on other products It should be obvious to anyone after a little thought that, with a given speed of transactions and a given quantity of monetary media, an increased total expenditure on one product can take place only at the expense of a diminished total expenditure on another product

It should be noted that this proposition relates not merely to increased prices but to increased "outlays," i e , the product of price times quantity Emphasis might also be laid on the word "product" in another sense, for it might be possible for money to circulate at a different speed in respect of payments for products than in respect of other payments The theory of the so-called "cession payments," as it was, for example, developed by Wieser,[9] seems implicitly to assume that payments which do not relate to purchases of goods take place, so to speak, "in no time," or, more precisely, that they edge their way in between the pay-

The theory of "cession payments"—

[9] Friedrich Wieser, "Theorie der gesellschaftlichen Wirtschaft," *Grundriss der Sozialokonomik*, second edition, Tubingen 1924, p 180 "Cession payments" are 'payments which are made for various reasons outside the market of real goods ' In the English translation, published under the title *Social Economics*, New York 1927, the definition reads as follows "We shall call payments by assignment all those which are made under any title outside the market of natural values ' (p 252) We shall substitute for Wieser's term 'cession payments" or, as it was translated, ' payments by assignment," the term "transfer payments" although in the literature this latter term has only been used in connexion with international payments There is, however, no reason why the term "transfer payment,' which so conveniently describes the transfer of purchasing power due to "one sided" payments, should not be used in the theory of domestic payments

ments for purchases of goods without causing any postponement of the latter

When such a "cession payment" or "transfer payment" takes place, the payer makes over his buying power to the payee without, according to Wieser's theory, necessarily causing any changes in the direction of production As examples of transfer payments, Wieser referred to loans, investments, insurance premiums, gifts, charity, tax payments These payments are, in themselves, not supposed to have any effect on the disposition over goods and on the production of goods, it is only as the recipients come on to the market for goods and services that they can, through their purchases and the respective "price payments," cause changes in the direction of production in so far as they use their buying power in a different manner from that in which those who previously held command over the funds had used them If, for example, a borrower, or a recipient of charity, buys the same things as the lender, or the benefactor, would have bought, then in a stationary economy the transfer payments would have caused no change According to Wieser's theory, the transfer payment itself may be regarded as directly indifferent from the standpoint of the price system [10] It is only the subsequent price payments by the recipient that can lead to price shifts Thus the demand of the borrower will, for instance, raise the prices of certain means of production while the decline in the demand of the lender lowers the prices of certain consumers' goods, or the demand of the recipient of relief will raise the prices of certain consumers' goods while the decline in the demand of the benefactor or the taxpayer causes the prices of certain producers' goods to fall

[10] "In a static economy, the equation of supply and demand is by no means interfered with by the influence of assignment payments or of derived income," Friedrich Wieser, *op cit*, English edition, p 255

Wieser did not explain how the mechanism of payment differs in the case of transfer payments from the case of price payments, or how the time sequence of payments should make the direct effect of transfer payments neutral towards the price system He was obviously concerned exclusively with the system of mutual interdependence of commodity prices, and he made certain simple assumptions which avoided complicated questions connected with the circuit flow of money The assumptions he made are essentially the same as those which are implicit in the concept of "neutral money" Under the assumption of neutral money, disturbances of the circuit flow of money cannot occur, or must somehow be compensated

Apparently, "neutral money" is tacitly assumed

43 Wieser should not, however, have stopped his analysis where he did Given neutral money, not only the transfer payments which he enumerated would be indifferent from the standpoint of the price system, but certain price payments would be equally "indifferent" Payments for goods which cannot be produced or reproduced or of which the production cannot be increased, would have to be regarded as "indifferent" in the described sense—indifferent because the prices paid for these goods cannot exert any influence on their production or on the disposition of the productive factors [1] Let us assume a stationary state and suppose that a certain individual A possesses a highly prized picture by a celebrated painter The picture comes under the category of non-reproducible goods Now if B wants to acquire this picture and obtains it at a high price, then B's payment to A need not result in any shift in the interdependent price structure of

Certain "price payments" may have the character of "transfer payments"—

[1] J G Koopmans, in discussing my remarks on this subject, proposes to replace the above formulation by the criterion of whether the good is "without any cost relationship to other goods or not" See J G Koopmans, "Zum Problem des Neutralen Geldes," in *Beiträge zur Geldtheorie*, edited by F A Hayek, Vienna 1933, p 339

the economy, providing A uses the purchasing power he acquires in the same way as B would have used it had he not bought the picture Here we have an example of a price payment which is—all this still under the neutral money supposition—of the same "indifferent" character as a transfer payment The high price fetched by the picture would leave all other prices unaffected The same thing might be true in the case of any good which is the object of exchange, so long as, whether for technical, legal, or economic reasons, its production cannot be increased despite the rise in its price The prices of such goods may rise without necessitating any changes in other prices [2]

The conclusions of the previous paragraphs might also be relevant to the case of a rise in security prices The payment of the price of the securities is in the nature of a transfer payment The purchase of securities is neither more nor less of a transfer payment than every loan, it is a transfer payment acknowledged by a special kind of certificate or receipt And if the seller of the securities uses the purchasing power he received in order to buy the same goods as those of which the buyer of the securities relinquished the purchase, and if the purchase takes place at the same time as it would have been made by the buyer of the securities, then the rise in security prices will leave commodity prices unchanged But if the seller of the securities buys producers' goods, as may happen

[2] In the German edition of this book I tried to show in a footnote that changes in monopoly prices under conditions of inelastic demand may be interpreted as cases of the same kind An increase in monopoly rent might, I thought, be used for the purchase of the same article as the consumers of the monopoly product had to relinquish Koopmans expressed the opinion (*op cit*, pp 337 ff) that I had stopped half way, as in fact every payment might be indifferent with respect to the economic process I myself think now, however, that I went too far since my object was not to investigate how things would be if money were neutral, but to ask in what cases this neutrality would be possible or would actually prevail

especially in the case of new issues, then the prices of these goods will rise at the expense of those goods which the buyer of the securities had to give up The so-called general commodity price level, exclusive of securities, would not, however, be affected security prices could rise without there being any consequent fall in other prices in general

44 This theory of transfer payments is, however, of no value in explaining reality unless it can be plausibly shown that the recipient makes use of his purchasing power without delay "Without delay" means at the same time that it would have been used if the transfer payment had not been made Suppose, under conditions of a stationary circuit flow of money N had to make a price payment to M, the person next to him in the circuit, instead of doing this he made first a transfer payment to N′ which enabled the latter to take over the goods from M, if a time interval, however small, elapsed between the receipt of the transfer payment and the use of these funds for a price payment, then a postponement of the demand for the goods and a consequent tendency to a price fall would be unavoidable

The theory of transfer payments is of no value unless it proves absence of delays

When transfer payments delay the purchase of products, product prices tend to fall

The assumption of a loss of time resulting from the transfer payment can be avoided only under one condition If N makes the transfer payment to N′ earlier than he would have made the price payment to M, then the payment by N′ can reach M still without delay It is possible to think of a number of institutions, or habits, which make it probable that many transfer payments do take place more quickly after the receipt of income than would expenditures on the market for goods The income-recipient who hands over purchasing power to his wife or his housekeeper does it in such a way that the purchases take place no later than if he had had to go to the market

It may well be that transfer payments are so fast that purchases are not delayed

himself The debtor who intends to devote part of his income to debt payment will usually make the necessary transfer immediately after he receives his income, whereas he will make his purchases of commodities only gradually over the income-period

Can we say the same of loans or of the acquisition of shares by savers? In a schematic picture of the circuit flow of money, we might assume quite arbitrarily that incomes were paid out regularly on Thursday, that the loan market functioned on Friday, and the commodity market on Saturday of each week In this case transfer payments, however large, would not delay the purchase of goods, or, to use another terminology, the demand for money by the economic system as a whole would be independent of the turnover on the credit market, or, to use still another formulation, the increase in the "money work to be done," i e, the increase in money transactions, would be "automatically" compensated by a rise in the transactions velocity [3]

This institution of the Friday loan market and the Saturday commodity market is far from existing in reality Nevertheless it is still possible that in reality something does take place which allows the results of this imaginary institution to be approximately achieved Budgeting in advance by the majority of income-recipients, for example, would tend to have the effect indicated If the individual budgets to save a fixed proportion of his income, and decides to use his savings to purchase securities, it is very probable that he will do this right at the beginning of the income-period, so that his average cash balance will be lower than it would have been if he had spent all his income on consumption Thus, if he buys the

[3] Cf the recent formulation in Arthur W Marget, *The Theory of Prices*, Vol I, 1938, e g, pp 584 ff

securities from someone who wants to use the proceeds in the commodity market, it is not unreal to assume that they will be used there no later than would have been the case if no transfer payment had intervened

—may help to avoid delays arising from transfers of money capital

A fairly plausible case can thus be made out for the hypothesis of neutral transfer payments But the strange thing is that very few authors have bothered their heads about the loss of time caused by transfer payments when they have been dealing with ordinary loans, relief payments, tax payments and the like [4] It has been thought necessary to emphasize the lapse of time only in the case of transfer payments connected with the securities market In so far as it is simply a matter of the flow of purchasing power through the stock exchange, i e , the transfer of purchasing power from the purchaser of the shares to a seller who intends to use it to purchase goods or services, it is difficult to see why the lapse of time should have been thought a greater evil here than in the case of ordinary loan transactions and other transfer payments As the argument usually runs in terms of whether stock exchange credit has harmful consequences which other kinds of credit have not, it is unnecessary to try to prove that stock exchange credit finds its way onto the commodity market in "no time", the question is only whether the purchasing power transferred is likely to take "more time" before it becomes demand for goods and services in the case of stock exchange credit than in the case of other kinds of credit

Not whether funds flow through the stock exchange in "no time" but whether it takes "more time" than through other channels, is the question

[4] Hans Neisser, *Der Tauschwert des Geldes*, Jena 1928, saw this problem (See p 9 'It is indeed formally possible for the process of making loans and granting credit to take a certain amount of time , thus if the social product were to remain the same but a relative extension of lending were to take place this would require money, increase the volume of transactions and give rise to a tendency to a fall in prices ") But he did not think that this was of much practical importance

45 The reasons which may permit the neglect of the lapse of time associated with transfer payments and certain analogous cases of price payments, particularly security transactions, are not sufficient to allow us to disregard the lapse of time which takes place when there is a continual repetition of the same event If the recipient of the transfer payment again transfers the purchasing power to someone else, and the next recipient does the same thing so that no demand for products is exercised during this time, then the interval which elapses before such a demand arises cannot be disregarded

A case where a long chain of transfer payments may occur is perhaps to be found in connexion with the conversion and funding of credits loans that have just been raised may be used to pay back old loans, and the sums repaid may be re-lent in order to be used again for paying back other loans and so on However, no authors have regarded this problem as an important one Other cases, too, are conceivable where a series of three or four successive transfers may take place before the purchasing power is employed on the market for goods and services [5] It has already been noticed that successions of purchases and sales can take place on the securities market, and that there is consequently a strong possibility that purchasing power may change hands many times without being used on other markets

We have already emphasized, perhaps more than enough, that the purchase and sale of securities within the actual stock exchange, i e , between the members of the stock exchange, by reason of its clearing organization requires hardly any circulating media and that an increase in turnover scarcely requires *more* circulating media Here, however, we are concerned

[5] E g , there are two transfer operations in the case of taxation for providing government relief, and four transfers in the case of debt repayment new lending distribution of dividends further lending

solely with payments between brokers and the public which usually take place through ordinary circulating media, mostly bank deposits If purchaser A gives a cheque to his broker and seller B asks for a cheque from his broker if B then hands his cheque back to his broker for the purpose of buying other securities and C the seller asks for a cheque for his sales proceeds, and this process goes on repeating itself, then for the time that it lasts cheque accounts will be tied up in security speculation

If speculators who sell ask for cheques from their brokers, and send cheques for their new purchases, bank deposits are tied up

The picture just drawn does not, however, represent the situation on all stock exchanges In the United States, for example, it is by no means usual for the seller of securities who is contemplating buying other securities to request his broker to give him a cheque for the amount due It is more usual for him to leave it on account with his broker until his new order to buy has been given and executed The broker, however, will not maintain idle bank deposits to the amount corresponding to the total of all the deposits his customers keep with him He is more likely to use his bank deposits, once they exceed a certain minimum, to cover his debts, or if he has no debts, to grant loans Customers who keep on selling, buying, selling, buying, do not therefore use ordinary circulating media such as bank deposits for these transactions their accounts with brokers perform the function of purchasing power between these customers There is thus a separate money, so to speak, in the form of brokerage deposits, which serves to effect security transactions between the regular customers of the brokers [6] The buyer of shares draws on his broker-

But in the United States speculators customarily keep their deposits with brokers, if they plan further trading,—

—and the brokers' bank deposits may be only a fraction of the customers' deposits with them

Hence the customers' "brokerage deposits" are a peculiar type of money—

[6] The brokerage deposits, which are the accounts that customers keep with their brokers, must not be confused with the brokers' deposits which are the accounts which the brokers keep with their banks The fact that brokers are not allowed to accept demand deposits, i e, they are not allowed to act as deposit bankers, does not alter the fact that deposits of customers with their brokers exist and that these deposits circulate, although only in security transactions, of course

age deposit and the seller acquires a brokerage deposit, which, the next time he buys securities, is transferred to a third speculator and then to a fourth and so on In short, speculation by the public can also proceed without the use of bank deposits, or, that is, without the use of ordinary circulating media, so long as the seller does not require his broker to pay out what is due to him (See Appendix B for a description of the circulation of brokerage deposits)

On some exchanges, however, it is usual for the broker to send a cheque to the seller of the securities "automatically," or, that is, without being especially requested to do so And even on exchanges where this is not the general rule, there are customers who request payment by cheque If customers after having taken their funds away from their brokers continue to speculate, a chain of transfer payments is carried on with bank deposits Such a chain also occurs when customers withdraw their funds from their broker in order to lend them (not on the same day) to other speculators, who perhaps again buy shares from people who demand immediate payment by cheque and do not decide until later either to speculate further or to lend their funds at call In short, when sellers keep their sales proceeds, not with their brokers but on account with their bank, until they decide to use them on the stock exchange again, there is undeniably a tie-up of the deposits in question [7]

46 All that remains to ask is when are these chains of transfer payments between the bank accounts of security speculators likely to arise? From all that

[7] Cf also John H Williams, "The Monetary Doctrines of J M Keynes," *The Quarterly Journal of Economics*, 1931, Vol 45, p 573 "I recognize too, that to the extent that speculation was by traders, through brokerage accounts the point about the economy of the whole process has force But this " neglects " the fact that securities were bought by people all over the country through their bank accounts "

we have seen up to now it would appear that in order that this shall happen it is necessary for the "speculative fever" to infect a very wide circle, this means, in the case of most countries, that it must extend to circles which are not regular customers of the brokers and which usually have little or nothing to do with security transactions Moreover, the chain of transfer payments comes to an end as soon as a seller uses the sale proceeds to purchase goods or services (which will most often occur if the seller is a firm issuing new securities) For a continued chain of stock transactions it would therefore be necessary that the incentive to new issuing activity, or, more specifically the incentive to real investment be smaller than the incentive to security speculation

This condition arises only when the speculative fever affects the general public,—

—and when real investment is much less attractive than stock speculation

Let us therefore consider the possible causes of security speculation by the public and ask whether the conditions formulated above are likely to prevail? The motive for security speculation by the public lies in the expectation of further increases in security prices These expectations may be based in the first place on prospects of increased dividend payments by the corporations If the prospective profits of the enterprises actually do rise, there will be a corresponding desire to expand and an increased demand for capital on the part of these enterprises This demand for capital for industrial activity will induce firms to sell out their holdings of securities (securities held in portfolio) and to float new issues thus the same motive which invites purchases of securities will also lead the sellers to employ the sales proceeds in production

Good prospects for business profits invite both demand for stocks and real investment

It may happen, however, that the expectations of a rise in the prices of securities have no such material justification There may be a feeling of optimism which calls forth a supply of liquid cash balances (dishoarding) sufficient to turn it into an effective demand

for securities This is especially likely to occur if the movement is supported by additional bank credit We shall return to this point presently Here we want to inquire what happens in the case where there is no increase in the supply of money capital and no rise in profits of the enterprises to form the basis for the sudden development of boom sentiment The most probable result in this case is a quick recession of security prices For higher stock prices will invite a new supply of securities, and the corporations, which want to take advantage of the higher prices in order to draw funds from the stock exchange and use them for real investment, will find that there are no additional funds to be had Chains of speculative security transactions are, therefore, hardly likely to develop in these circumstances

It is impossible for the profits of all or of the majority of enterprises to rise without an increase in the effective monetary circulation (through the creation of new credit or dishoarding) unless industry is presented with a general fall in wages or a reduction of taxation Under these circumstances the improved profit prospects will, it is true, cause security prices to rise, but this rise will take place almost at one stroke and not by way of a gradual upward movement in the stock market Chains of speculation can develop only as the result of continual price rises over a longer period A single rise in the level of profits cannot produce a continuous rise in capital values and cannot, therefore, lead to extensive speculation by the public

47 A factor which is capable of evoking expectations of a rise in security prices is a reduction of the interest rate In so far as this reduction occurs merely as the result of an increased supply of intended

new savings,[8] the likelihood of a long-lasting upward movement of the market is rather meagre It is easy to see that if dividend prospects are unchanged and the rate of interest is reduced, security prices will rise,[9] and it is more than probable that a sufficient amount of security sales from "final sellers" (unloading by temporary holders and new issues) will be quickly forthcoming comparatively small offerings of securities will suffice to absorb the increased supply of new savings and to drain them off to other markets For no matter how the supply of money capital derived from current new savings may fluctuate, it is scarcely conceivable that the total supply of money capital can ever rise to unexpected dimensions as the result of an increased flow from this source If the public devotes only its new savings to the securities market and the new demand at once causes some groups of securities to become "firmer," it will not be necessary for the purchasing power of the public to be withdrawn from the commodity market until it has "run through" all the securities quoted on the exchange and has adjusted the prices of securities, one after the other, to the new market conditions In reality this task is performed by quickly reacting professional

Continual rise cannot be caused by increased voluntary saving either

A new supply of securities would quickly stop soaring stock prices,—

—if the demand came only from intended new savings

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[8] The supposition that a more plentiful supply of intended current new savings will lead to a reduction in the interest rate is, of course, very old fashioned since Keynes has decided to treat the interest rate either as an independent variable or as being determined solely by the quantity of money and liquidity preferences (*General Theory of Employment, Interest, and Money* pp 245 ff and pp 167 ff) Keynes' critics have, however, shown that the 'classical'' assumption about the connexion between saving and the interest rate still has something to be said for it (See e g , A C Pigou, 'Mr J M Keynes' 'General Theory of Employment, Interest, and Money',' *Economica*, 1936, pp 115 ff)

[9] Changes in money market rates which are considered to be only temporary will clearly not cause 'adjustments'' of security values Richard N Owens and Charles O Hardy (*Interest Rates and Stock Speculation, A Study of the Influence of the Money Market on the Stock Market*, Publication of the Brookings Institute of Economics, New York 1925) apply an unnecessarily elaborate scientific apparatus to verify this simple and obvious fact statistically

speculators who require no money to carry out their transactions The public's money is not "held up" because the professional speculators, who discount the public demand, will already have raised the level of security prices and thus called into being a new supply of securities from the producers

If it were not for the elasticity of bank credit, which has often been regarded as such a good thing, a boom in security values could not last for any length of time [10] In the absence of inflationary credit the funds available for lending to the public for security purchases would soon be exhausted, since even a large supply is ultimately limited The supply of funds derived solely from current new savings and current amortization allowances is fairly inelastic, and optimism about the development of security prices would promptly lead to a "tightening" on the credit market, and the cessation of speculation "for the rise" There would thus be no chains of speculative transactions and the limited amount of credit available would pass into production without delay

Only if the credit organization of the banks (by means of inflationary credit) or large-scale dishoarding by the public make the supply of loanable funds highly elastic, can a lasting boom develop The demand for credit by optimistic speculators rises as the borrowed funds are used for stock purchases from "final sellers" The reason why this increased demand does not lead quickly to the exhaustion of the supply is that the supply of credit is not restricted to the scarce supply of current new savings If the demand rises the banks are able to grant additional credit on unchanged or practically unchanged terms The pro-

[10] The so called "brokers' loans on the account of others" will be discussed in the next chapter It may be mentioned here that the ample funds of the "others" frequently are the result of credit expansion

fessional speculators cannot anticipate the entire development at one stroke because they do not know to what limits the credit expansion will go The upward movement of security values which is kept going by this means is capable of producing a chain of speculative operations, and it is then possible for the money derived from credit expansion to remain "tied up" for a time in a succession of transfer payments connected with stock exchange transactions

Since credit inflation is a condition for chains of speculative transactions, it is only inflationary funds which are in danger of becoming tied up

It does not, of course, depend on the origin of each particular dollar coming onto the stock exchange whether it will be drained off to other markets immediately or only after some delay This is not what was meant when we said that it is the money derived from credit expansion that is likely to be tied up in stock exchange transactions It is of course possible for funds which come out of real savings to "get stuck" in the way described, but this is only probable if a particularly abundant credit supply has been produced by the emergence of inflationary credit It is not the origin, but the excessive dimensions of the supply of credit, which is the decisive factor The supply can, however, reach these dimensions only if it comes from an inflationary source

48 We have shown that it is possible for bank deposits to be temporarily tied up in stock exchange operations and so not to flow immediately into "productive channels" Does this lend support to the view that there can be an "absorption of the country's credit in speculative security operations to an alarming extent"[1], or the view that stock exchange operations rob industry and "legitimate" business of the available supply of capital?

The possibility of absorption of funds by stock transactions—

These views have not been substantiated so far

[1] Federal Reserve Board, *Annual Report* for 1929, p 1

We have given sufficient proof that only a very small fraction of all stock exchange transactions are capable of tying up bank money Moreover, it should be remembered that

(1) our conclusions related to inflationary credit or rather to periods when inflationary credit was being created,

(2) the money which flows onto the stock exchange and is tied up in a series of operations, need not come directly from stock exchange credits (brokers' loans) but that any "inflationary" credit, no matter in what form it was created, may find its way onto the stock exchange,

(3) an important distinction has to be drawn between a delay in the productive employment of funds derived from intended savings and a delay in the productive employment of funds from inflationary sources

The fact that stock exchange speculation by the public may tie up inflationary credit will probably not be judged an evil once the effects of this inflationary credit on production are realized If inflationary funds were held up for the time being on the stock exchange, there would be a temporary "localization of the inflation"[2] The vague notion which many people have had of funds being "held up"[3] may in this case be not so far from the truth Here we have attempted to make this vague notion more precise by

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[2] Thomas Balogh, "Latente Inflation," *loc cit*, p 596

[3] This idea is not recent it was put on paper as early as 200 years ago by the economist Richard Cantillon (who died in 1734) in his *Essai sur la nature du commerce en général* (London, *recte* Paris 1755) In the last sentence he says 'Les billets de banque extraordinaires, qu'on fabrique et qu'on repand dans ces occasions, ne derangent pas la circulation, *parce qu'étant employés a l'achat et vente de fonds capitaux*, ils ne servent pas a la depense des familles " and even Cantillon concludes the sentence by saying that the effects of such dangerous operations do not become apparent until a later date

describing the conditions necessary for a long series of transfer payments The results of our analysis prevent us from making the mistake of speaking generally about the "deflationary effect of the stock exchange boom" where, at best, the effect is one of temporarily absorbing part of the inflation

The newly created funds may make their way in the first instance to that section of the public which is interested in the securities market, the boom sentiment of these people raises the prices of the shares of various classes of enterprises and some sellers may hold their funds on bank account for intervals between transactions As various sellers "get out of the market" and as new issues are floated, the inflationary credit is drained off into production [4]

—before the funds are drained off into production

The phenomenon of the temporary tie-up of inflationary credit in security speculation would be very useful in assisting the monetary authorities to frame their credit policy If the volume of credit of all the banks and the movements in the securities market were carefully watched, it might be possible to put an early brake on the boom and thus succeed in avoiding a more violent reaction A restrictive credit policy applied at the right moment would check the progressive watering of the capital supply through the expansiveness of bank lending A measure of bank policy of this kind should not, however, be associated with any such foolish slogans as "Down with stock exchange credit and let industry have it!" because the very purpose of the measure would be

If there were absorption to any significant extent, it might help in the control of credit,—

[4] See W M Persons, "A Non Technical Explanation of the Index of General Business Conditions," *Review of Economic Statistics*, 1920, Vol II, p 47 Persons locates the "drain of funds from security markets into business" at the transition from the upswing to the boom The barometer of the three markets shows a time lag between the rise in the curve of the speculative market and the rise in the curve of the commodity market However, I do not believe that the tie up of the inflationary credit in stock exchange speculation is much of a reason for this lag

to stop the expansion before the credits had given an excessive stimulus to industrial activity If the stock exchange really had the power to absorb inflationary credit for good and for all, it would probably be a very healthy arrangement from the point of view of industrial production, because the misdirection of investment which is caused by the "artificially" easy facilities for procuring capital would be avoided In reality, however, stock exchange transactions tie up only a relatively trivial amount of the inflationary credit and do so merely for a short time The stock exchange credits begin to "work" only too quickly on production If the authorities are aiming at a rational banking policy, they should not complain of the stock exchange withdrawing money from industry, but should take advantage of a temporary localization of the inflation to try as far as possible to neutralize the overflow of the latent part of the inflation into production by putting a brake on the credit expansion [5]

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[5] Professor Howard S Ellis has criticized my views on the ground that the inflation absorbing effect of the speculation takes place not at the beginning but at the end of the expansion In his book *German Monetary Theory, 1905 1933,* he says (p 386) "If the factors augmenting purchasing power tie up operated early enough … the boom would not occur What actually happens is that the withdrawal (i e , the tie up of funds) serves as a check at precisely the wrong time, *after* the artificially induced industrial boom has passed its zenith and approached a limit "

I agree entirely with Professor Ellis that the inflation absorbing effect does not begin to act early enough The main point, however, is that the "absorption" affects only a trivial fraction of the newly created credits In practice, therefore, there can be no question of stock exchange speculation depriving industry of all or even of a considerable part of the funds created by inflation The problem might be put in this way Assume that a credit expansion is taking place at the rate of 100 units of monetary media per unit of time A large part of this new money passes through the stock exchange In response to the rise in share prices wide circles of the public begin after some time to get interested in stock speculation The resulting transactions "tie up" some money, let us say 5 or 10 units, so that in each unit of time, instead of 100 units, only 95 or 90 units of the newly created money flow to the industrial markets Thus, given a constant rate of credit

CHAPTER VII

THE DEMAND FOR LOANS BY THE STOCK MARKET

49 There are a considerable number of authors who regard the volume of loans to stockbrokers as a measure of the funds which have flowed onto the stock exchange or even as a measure of the funds that have been absorbed by the stock exchange In actual fact it is neither of these things

The total volume of lending to brokers within any period may be substantially smaller than the amount of money capital which has flowed onto the stock exchange, or it may be greater There is no definite relation between these items, nor even any necessity for them to move in the same direction Why this is so will be explained in the course of this chapter

The volume of brokers' loans tells us nothing about the amount of funds that has flowed onto the stock exchange,—

The analysis given in the previous chapters should have made it sufficiently clear that the volume of loans to brokers has nothing to do with any tie-up of purchasing power in stock exchange transactions The subsequent sections will complete that exposition

—and still less about a tie up of funds

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expansion, there would be a somewhat smaller rate of flow to industry Those who are of the opinion that the rate of growth of industrial expansion should never decline, even if it could be kept up only by credit expansion, will, in this case, advocate still easier credit conditions Those who are of the opinion that the credit expansion should in any case be checked (and the sooner the better), will not be worried by the (small) possibility that part of the inflation will be absorbed by speculation in the way described

Incidentally, Professor Ellis sees the causes of possible ' absorp tion" less in stock exchange transactions than in induced hoarding activity We shall deal with this in Chapter VIII

First of all it is necessary to explain the essential facts relating to the mechanism of brokers' loans [1] When does a broker borrow? He borrows, like any other person, when he expects his receipts from ordinary sources to be less than his outgoings His receipts, apart from new borrowing, consist mainly in the proceeds of sales to other brokers and in receipts from his customers (or for their account) His outgoings, apart from loan repayments, consist mainly in payments to other brokers for purchases from them and payments to customers

Brokers borrow when they have to pay out more than they receive

The cash ledger of any individual broker will thus show on the receipts side, receipts from brokers and receipts from (or on account of) customers, and on the expenditure side, payments to brokers and payments to customers If, however, we were to take all the brokers as a group, then the payments between brokers would of course cancel out, and only the payments from and to customers would remain The reason why we select for inspection all brokers together instead of a single broker is that our object is to explain the total of brokers' loans and not loans to individual brokers The individual broker will of course need to borrow when he has to pay a clearing difference to another broker, but the latter will repay

Payments between brokers cancel out for all brokers taken together

[1] The best description of the mechanism and the significance of brokers' loans is to be found in a series of articles by Wilford J Eiteman See "The Economics of Brokers' Loans," *American Economic Review*, 1932, Vol XXII, pp 66 77, "The Economic Significance of Brokers' Loans," *The Journal of Political Economy*, 1932, Vol XL, pp 677 690, "The Relation of Call Money Rates to Stock Market Speculation," *Quarterly Journal of Economics*, 1933, Vol XLVII, pp 449 463 The analysis of the first sections of this chapter, which did not appear in the German edition of the book, is largely based on Eiteman's investigations The analysis deals in the main with the New York Stock Exchange, which until the summer of 1938 had daily settlements The procedure on the London Stock Exchange would in part give other results The

a loan or grant a loan *at the same time* and no later[2] Consequently, the payments of clearing balances between brokers do, it is true, lead to shifts in the person of the borrower, but they do not give rise to changes in the total volume of borrowing Changes in the total volume of borrowing are caused exclusively by differences between payments *by* customers and payments *to* customers If the payments *to* customers (mostly in respect of the proceeds of sales) are the larger, then the brokers need to take up new loans, if the payments *by* customers (mostly in respect of purchases and also dividends received on their behalf) are the larger, then the brokers are able to pay back old loans

Payments from and to customers determine the brokers' borrowings

The process may be made clearer by the aid of examples depicting schematically the course of events[3] (Ledger balances are shown in Appendix A)

Monday Mr A pays his broker the sum of $20,000 and informs him that he will give him an order to buy in due course The broker credits A with the

First illustration,—

difference arises essentially from the two institutions the long settlement period in London which greatly increases the off setting possibilities, and the custom of immediately remitting sales proceeds (in the absence of orders to the contrary) by way of bank cheques instead of merely crediting them to the account of the seller In many respects the two differences tend in the opposite direction and their effects may cancel out

2 "Simultaneity" is present for all practical purposes when the two transactions are carried out on the same day In New York cash deficits for a few hours are met, if it seems necessary, by so called 'day loans," i e, loans that are "to be repaid at or before the close of business this day"

3 Such examples have of course to isolate the effect of the particular events that we want to explain They have therefore to abstract from all other transactions which may be taking place simultaneously but which have no direct connexion with the matter in hand, and they have also to exclude intermediate steps

amount and in the meantime applies it to the purpose of reducing his bank debts [4]

The total of brokers' loans declines on this day by $20,000

Tuesday Mr A gives his broker an order to buy The broker buys the shares ordered by his customer for $19,500 from another broker who is selling the shares on behalf of his customer Mr B

Settlement does not take place until the next day [5] To-day there is no change in the positions

Wednesday A's broker borrows $19,500 from his bank[6] in order to pay to Mr B's broker The latter credits his customer with $19,500, but as B has not demanded payment he (B's broker) uses the $19,500 to pay off part of his own debt to the bank

—which shows that stock purchases and sales do not affect brokers' loans,—

On this day the total of brokers' loans has not changed

Thursday Mr B gives his broker an order to buy $12,000 worth of stocks and asks for payment of the rest of what is due to him The broker borrows $7500

[4] If there were simultaneous withdrawals of funds on the part of other customers, he would apply the funds received to these out-payments so that the funds would have the effect of making it unnecessary for him to increase his bank debts If he had no bank debts, he would use the funds received to lend to other brokers so that the bank debts of all brokers together would decline A schematic example can and should leave these possibilities out of account, because they do not alter the result, i e, the relevant end effect of the initial event Brokers often deny that they use the in payments of their customers for their "own purposes" But this is naive It would be ridiculous if they were to accumulate enormous bank deposits instead of using their receipts to offset their outgoings

[5] In the twenties, the settlement on the New York Stock Exchange took place on the day following the transaction From 1934 to 1938 settlement was on the second day following the transaction Since September 1, 1938, Tuesday and Friday of each week are settlement days

[6] In practice he will borrow a larger amount and a round sum This is, however, simply a matter of adding together a large number of transactions and can be ignored here

in order to pay this amount to Mr B He buys the required shares from another broker who is selling for the account of a Mr C

On this day brokers' loans have risen by $7500

Friday B's broker borrows $12,000 in order to pay C's broker [7] The latter credits his customer with the $12,000 and reduces his own debts

On this day the aggregate of brokers' loans has not changed

—that an excess of customers' deposits over customers withdrawals causes a decline in brokers' loans,—

—and that a new flow of saved funds to the stock exchange causes a fall in bank loans and deposits

Review of the week The total amount of brokers' loans outstanding has fallen by $12,500 This is explained by A's paying in $20,000 and B's withdrawing $7500 Mr A has acquired a brokerage deposit of $500 and Mr C a brokerage deposit of $12,000 these new brokerage deposits of together $12,500 correspond to the decline in brokers' loans The decline in brokers' loans corresponds in turn, if they are loans from the banks, to a decline in bank deposits which involves an increase in the "excess reserves" of the banks In so far as the flow *on* to the stock exchange has not flowed *off* the stock exchange, it has caused a paying back of bank credits and thus made it possible for new bank credits to be granted to the same amount The new flow of money capital to the stock exchange is counterbalanced in the case described by a reduction in bank lending to the stock exchange

50 The fact that a large number of speculators buy more stocks than they can pay for out of their own resources, i e , that they borrow "margin loans,"

[7] In reality the broker does not, of course, borrow such small amounts In practice it might perhaps happen that the $7500 of Thursday would be part of a loan of $100,000 and that the $12,000 of Friday would be covered by simultaneous receipts from other customers It must not be forgotten that in this example we are isolating a single case

would not in itself necessitate any growth in brokers' loans For if the people whose stocks are sold to the "margin speculators" do not withdraw the sales proceeds from the stock exchange, that is to say, if they do not take them away from their brokers, the brokers have nothing to pay out and do not need to borrow anything The buyer of the stocks will have run up debts with his broker, but the brokers do not need to borrow new money from anybody so long as the seller does not demand payment of the money due to him The buyer will have bought without paying in the amount due, and the seller will have sold without being paid the amount due If the buyer and the seller both keep their accounts with the same broker, then there will not even be any alteration in the borrowing positions of the individual brokers If the buyer and the seller keep their accounts with different brokers, then the broker of the buyer will have to take a loan and the broker of the seller will be able to pay back a loan or in the case that this latter broker has no debts he will himself lend to the broker of the buyer [8]

When customers buy "on margin" and thus borrow from the brokers, the brokers need not borrow unless the sellers demand payment

Thus, the total amount of brokers' loans is directly dependent neither on the stock exchange turnover, nor on the level of security prices, nor on the new margin debts incurred by speculative buyers It is dependent only on the difference between payments in by customers who have bought shares (plus dividends received for customers) and withdrawals by

Neither security turnover, nor security prices, nor speculators' borrowings directly determine brokers' loans

[8] If this loan (of the seller's to the buyer's broker) is granted not directly, but through the agency of a bank (now prohibited in the United States), the statistics will show an increase in brokers' loans This would be a case where a rise in brokers loans does not have the slightest connexion with the inflow, the outflow, or the absorption of money capital If a broker who has surplus funds lends to his own customers, this does not appear in the statistics of brokers' loans But if he makes the loan, through the agency of a bank and of another broker, to a customer of this other broker, brokers' loans will rise

customers who have sold shares (or are collecting dividends) What these sellers, whether they be owners of old shares or issuers of new shares, do with their money is of course not apparent from the statistics of brokers' loans All that may probably be concluded from the statistics[9] when they show a rise in brokers' loans is that larger sums have been withdrawn from the stock exchange, that is from the brokers, than have been paid in to the brokers

Let us again illustrate the relationships by taking another week's transactions (Ledger balances are shown in Appendix A) Second illustration,—

Monday Mr A, who has deposited securities to the value of $20,000 with his broker, is optimistic and desires to buy more securities to the value of $10,000, i e , he takes up a "margin loan" The broker buys the shares from another broker who is selling them for the account of Mr B

Settlement does not take place until the following day

Tuesday A's broker borrows $10,000 and pays this sum to B's broker The latter credits B with the amount and reduces his own debts

Thus brokers' loans in the aggregate have not risen The margin debts of customers to their brokers have risen (since Mr A now has a debit of $10,000 against his account) and the brokerage deposits of customers have risen (since Mr B now has a credit of $10,000 to his account) The margin debts of the brokers, i e , the sum of brokers' loans, have however remained unchanged

[9] Only probably, but not with certainty, as may, for example, be seen from the preceding footnote, and will be seen further below in this chapter

Wednesday Mr B orders his broker to pay him $5000 (of the $10,000 due to him) and to buy certain shares for $8000 He thus incurs a margin debt to the extent of $3000 The broker borrows $5000 to pay out to B He buys the $8000 worth of shares from a broker who is selling them on behalf of C

On this day brokers' loans have increased by $5000 Settlement of the stock purchase takes place to-morrow

Thursday B's broker borrows $8000 and pays this amount to C's broker The latter credits C with the $8000 and uses them to reduce his own debts

On this day the total of brokers' loans has not changed It will not change until C, or somebody from whom he buys other shares, withdraws money from the broker

—which shows that the excess of new customers' borrowings over new brokerage deposits held by customers equals the rise in brokers' loans,—

Review of the week The sum total of brokers' loans has risen by $5000 This is the amount withdrawn by B The margin debts of customers have risen by $13,000 (A borrowed $10,000 and B $3000) and the brokerage deposits of customers have risen by $8000 (which were credited to the account of C) The difference between the growth in customers' debts to brokers and the growth in customers' deposits with brokers (which are identical with brokers' debts to their customers) is balanced by the growth in brokers' debts to the banks The increase in lending by the banks amounts to $5000, the new brokers' loan led to the creation of a bank deposit which was placed to the account of Mr B on Wednesday What he does with it we do not know He may use it to increase the stocks of materials or the equipment of his firm, he may buy his wife a fur coat with it, he may lend the money and earn interest on it (see § 52), or he may, in certain circumstances, leave it idle (see Chapter VIII)

—and that the new brokers' loans create bank deposits to account of those who withdraw funds from the stock market

The expansion of bank lending was here the source

of the flow of money capital to the stock exchange, but it had no sooner flowed onto the stock exchange than it flowed out again, since the brokers' loan was only borrowed for the specific purpose of making payments to customers

These interconnexions have been described with remarkable clarity by Eiteman He comments on the enormous figures of brokers' loans in New York in 1929 in the following terms "Since increases in the total of brokers' loans represent an excess of customers' withdrawals over deposits, it follows that the huge brokers' loan total of 1929 indicated the amount of funds withdrawn from speculation rather than the amount diverted into speculative channels for purposes of aiding stock gamblers to trade on margin Whether these loans also deprived legitimate business of needed funds depends upon the uses to which the funds were put by those who made the withdrawals "[10] If the sellers who withdrew these funds had themselves used them to purchase other securities a couple of days later (as many other authors thought was likely), brokers' loans would have declined again, or in the case that the next sellers had immediately withdrawn the proceeds, would at least not have increased any further "But some group must have sold stocks without repurchasing, for the total of brokers' loans did increase During 1928 and the first nine months of 1929, corporations whose stocks were listed on the New York Stock Exchange are known to have printed and sold shares of new issues for which they received $3,042,120,000 in cash "[1] In short, a substantial part of brokers' loans were taken up in order to pay out new capital to corporations

The vast sum of New York brokers' loans in 1929 could be interpreted as indicating huge withdrawals of funds from the stock market,—

—especially by corporations which sold new issues of shares

[10] Eiteman, *op cit*, *American Economic Review*, 1932, Vol XXII, p 77 I shall have to qualify this statement of Eiteman's in § 56

[1] Eiteman, *op cit*, *Quarterly Journal of Economics*, p 460

Some writers believed the increase in brokers' loans was caused by stock price increases,—

51 Many authors were not prepared to accept this interpretation of the heavy increase in brokers' loans [2] The statistical correlation between brokers' loans and stock prices was too striking "The great increase in brokers' loans was a function of stock price increases "[3] And in saying this Professor Beckhart was undoubtedly expressing the opinion of many of his colleagues It is interesting to note that in this statement (true to the tradition of the Banking School) it is not the stock prices which are treated as a function of the volume of credit, but the volume of credit which is treated as a function of stock prices If what is meant by this is that in consequence of the higher prices the value of the turnover rises and the brokers require larger cash holdings to deal with this turnover, it may be said at once that it is simply not true (see § 40 above) Yet Professor Ellis also believes that "Local brokerage houses can no more expect to carry through a larger volume of business with the same credit balances than can a local grocer "[4] It seems to me that this misses the essential distinction The local grocer cannot help having his till fuller at the end of a busy day than on a day when business has been slack But the broker who has heavier receipts from customers, and in addition expects an active balance in the stock exchange clearing, will use his receipts even before the end of the day's business (he may use part of them even before the stock exchange clearing) either to repay his debts or to lend out at call There is no reason why he should keep larger bank deposits in consequence of the higher turnover or merely as

—especially because brokers would need larger balances for handling a larger turn over

This view is faulty —

—there is no inherent necessity for larger balances,—

[2] E g , Benjamin H Beckhart, "Fluctuations in Brokers' Loans and Interest Rates," *Proceedings of the Academy of Political Science*, Vol 13, 1930, p 13 'The rise in brokers' loans did not reflect a new method of financing industry, but an old method of security speculation "

[3] *Ibid*

[4] Howard J Ellis, *op cit* , p 384

a result of higher stock prices But even where rules or conventions or convenience induce the brokers to keep larger bank balances when their turnover or their debts increase, the effect is of a ridiculously small order of magnitude In proportion to the turnover and to the volume of brokers' loans in times of boom, or indeed in proportion to the total increase in circulation, the bank deposits of brokers are almost microscopically small

—and their relative size, even if increased, is trivial

Thus, in order to give the argument a generous interpretation and to make sense of the statement that brokers' loans are a function of stock prices, the level of stock prices must somehow be linked up with withdrawals of customers' funds The link is not difficult to discover High stock prices lead (1) to withdrawals of their gains by those who want to consume their additional "income," (2) to withdrawals of the whole of the sales proceeds by those who want to "get out" of the stock market, and (3) to the flotation of new shares and the withdrawal of the sales proceeds by the issuing corporations [5] All these withdrawals are, so far as is necessary, financed by new brokers' loans The rise in stock prices may thus be said to explain the volume of brokers' loans just in so far as it explains withdrawals of sales proceeds, to treat it as being in some way antithetical to these withdrawals is a grave misunderstanding

High stock prices, however, encourage withdrawals by profit takers, and by corporations issuing new stock

Brokers' loans finance these withdrawals

Earlier we drew a contrast between the thesis that the volume of credit is a function of stock prices, and the thesis that stock prices are a function of the volume of credit This antithesis is found very frequently, but unfortunately no care is taken to make clear the not unimportant fact that "the volume of credit"

[5] The point has been put similarly by R G Hawtrey, *The Art of Central Banking*, London 1932, p 70 "The favourable market for shares attracts new issues, and the rise of prices of shares yields speculative profits "

Supply of easy credit may lead to demand for brokers' loans

means in one case the "demand for credit" and in the other case the "supply of credit" An ample *supply* of loanable funds will lead to a lower interest rate, and, under certain circumstances, to increased business activity and higher stock prices The higher stock prices lead to withdrawals of funds from the stock market by the sellers of stocks, and thence to a *demand* for credit by the broker In what follows we shall try to show that the money which flows out of the stock exchange may sometimes reappear as part of the credit supply and make further rises in stock prices possible

Soaring stock markets induce stock issues—

52 The high stock prices offer corporations a rare opportunity to cover their past, current, and future capital needs on the most favourable terms Capital may have been raised in the past through unfunded debts or through the issue of fixed interest-bearing bonds The high stock prices provide the corporation with the incentive to alter its financial capital structure by paying back the debts or the bonds, and so reducing the interest charge and raising its profits The high stock prices also encourage corporations to raise capital for all kinds of new investment, including investment which is undertaken only because the conditions for obtaining capital are so favourable Finally, they encourage the raising of capital for which there are as yet no specific investment plans corporations do not want to let so favourable an opportunity for obtaining capital pass even if they have not drawn up their investment plans (In the United States, the regulations of the Securities Exchange Commission have made it impossible to raise capital for as yet undetermined purposes Stock issues of this kind were not infrequent during the boom of 1928-29)

—for refunding,—

—for new investment,—

—and sometimes for undefined purposes

In all three cases (refunding, new investment, and indefinite plans) the proceeds of the stock issues are

in the first instance withdrawn from the stock exchange, so that if the purchasers have procured funds by taking up margin loans there will be an increase in brokers' loans In the first and third cases, i e, where the newly raised money capital is not immediately used for the purposes of real investment, the money withdrawn from the stock exchange may return there in one of two ways The corporations (or the creditors who are repaid or the previous owners of bonds that are now redeemed) may themselves use their increased cash balances to *purchase stocks*, this would result in payments to brokers and a consequent decline in the volume of brokers' loans outstanding *Or* the corporations (and other recipients of the funds) may use their increased cash balances to grant *loans to brokers* This is very attractive if the rate of interest on call money is high The result is that the same funds (as originated in an initial broker's loan) may serve to finance withdrawals by other people and capital issues by other corporations—and the statistics will register a further rise in brokers' loans

The funds withdrawn from the stock market may return again—

—for other stock purchases,—

—or for other brokers' loans

Some part of the funds withdrawn by a corporation thus returns to the stock exchange Strictly speaking, of course, they do not go back "to the stock exchange" for they are only used there in order to be paid out to other persons and corporations Thus, the cash balances of one corporation may be transformed into cash balances of another corporation, but not without causing the statistical returns to show a rise in the aggregate of brokers' loans

The withdrawals by one seller may be used, through new loans to brokers, to finance the withdrawals by another seller

The analysis becomes increasingly complicated as we proceed, and it may be helpful to give a new illustration of the transactions of another "week" (Ledger balances are shown in Appendix A)

Third illustration,—

Monday Mr A, who has a large deposit of fully paid-up stocks, orders his broker to buy $35,000 worth

of stocks The broker obtains them from another broker who carries out the sale on behalf of Mr B At the same time as he ordered his broker to sell these stocks Mr B also directed him to purchase other stocks to the value of $53,000 of which $32,000 worth are a new issue of corporation M The broker buys the remaining $21,000 worth from another broker who is selling for the account of Mr C

Settlement takes place on the following day

Tuesday Mr A receives certain funds that he had been expecting and pays in $10,000 to his broker He thus remains in debt to the extent of $25,000 A's broker borrows $25,000 from his bank and pays $35,000 to B's broker B's broker pays $32,000 to corporation M for yesterday's sale[6] and $21,000 to C's broker B's broker must therefore borrow $18,000 from his bank for his customer's purchase C's broker, who, so far, has received no further orders from his customer, credits him with the $21,000 sales proceeds and reduces his own bank debt by the same amount

On this day the margin debts of customers have risen by $43,000 and brokers' loans by $22,000 ($25,000 plus $18,000 minus $21,000)

—which shows that buying, on margin, of new issues increases brokers' loans because the corporations withdraw the funds,—

Wednesday Mr C orders his broker to buy him $20,000 worth of a new issue of corporation N The broker makes the purchase Settlement takes place to-morrow

Thursday Corporation N withdraws the $20,000 deriving from yesterday's sale of stock The broker C

[6] Here we are making another rather unrealistic simplification It appears as though corporation M had conducted the sale of its new issue directly through this broker, and as though the sale to Mr B represented the whole of the issue A completely realistic exposition would not, however, alter the results

takes up a loan offered by corporation M[7] to the amount of $32,000 and (after paying $20,000 of it to corporation N) pays $12,000 back to his bank Mr B asks his broker to pay him out the sum of $6000 his broker finds Mr B has sufficient margin so he borrows the $6000 from his bank and remits them to B

—that these funds may be used for *other* brokers loans, which may serve to liquidate bank loans to brokers,—

On this day the margin debts of customers have risen by $6000 Loans granted by the banks for their own account have diminished by $6000 ($12,000 minus $6000) brokers' loans on account of others have risen by $32,000 The aggregate of brokers' loans has thus increased by $26,000

—that they may also serve to finance new margin buying of other new issues and thus withdrawals by other corporations

Review of the week The aggregate of brokers' loans has risen by $48,000 of which $16,000 are on account of the banks and $32,000 on account of others The margin debts of customers to brokers have risen by $49,000 (Mr A $25,000, Mr B first $18,000 and then another $6000) Brokerage deposits of customers have risen by $1000 (Mr C sold $21,000 worth of stocks and bought $20,000 worth)

The rise of $48,000 in the total of brokers' loans is explained by the fact that $58,000 have been withdrawn from brokers and only $10,000 have been paid in to brokers This payment came from Mr A, and the

[7] It is immaterial whether we assume that the brokers' loans for account of the corporations are granted directly or by the banks acting as intermediaries The latter would be the so called "loans on account of others" Under recent regulations these are no longer permissible in the U S (The Banking Act of 1933 prohibits member banks from acting as the agents of corporations and individuals in the making of loans on securities) It was the usual thing in the boom of 1928 29 However this may be, if the corporations lend out their liquid funds to brokers directly, the result is no different from the case where the lending takes place through the banks "on account of others," so long as these call loans are included in the statistics It may be that corporations will be less anxious to make these call loans if the banks do not act as intermediaries In the above example we assume that the corporation lends money at call without a bank acting as intermediary

withdrawals were those of the two corporations totalling $52,000 (M $32,000 and N $20,000) and the $6000 taken away by Mr B [8]

How much money has gone to the stock exchange?—

What does this figure of $48,000 signify? Was the amount of funds which flowed onto the stock exchange $48,000? Or was it $58,000 so as to count the remittances by customers as well as the loans? Neither the one nor the other can be seriously argued It would be quite unreasonable to calculate that on the Tuesday in our example $32,000 ($10,000 paid in by customers and $22,000 derived from bank loans) flowed onto the stock exchange and that on the Thursday a *further* $26,000 (in the form of loans) followed These "additional" funds were in fact still the same funds, parts of which were transferred from the account of corporation M to the account of corporation N and to the account of Mr B If corporation N also offered credits which were used to finance company O, and this process continued, one and the same dollar would wander on and on from one account to another and cause the total of brokers' loans to rise with each successive transfer

—by no means the total increase in brokers' loans, since it may count the same amount several times

The deposit by a saver—

53 What is the amount which can really be considered to have "flowed on" to the stock exchange in our example, and what has become of it? Let us assume that the $10,000 paid in by Mr A had been saved by him out of his current income These $10,000 must undoubtedly be treated as having flowed on to the stock exchange In addition the banks have granted credits to the extent of $16,000 net This sum which may be assumed to be the result of credit expansion by the banks has also flowed on to the stock

—and loans extended by banks for own account represent the real afflux,—

[8] In our example there was only very little realization of profits (the profit taking of Mr B) and there was no liquidation of bull positions This is why the total of capital raised by the corporations is so high in relation to the total of brokers' loans

exchange making in all $26,000 And where were these $26,000 at the end of our week? $20 000 has passed into the account of corporation N to await further allocation by the treasurer of this corporation, and $6000 were in Mr B s account on Thursday, but by Friday they had probably already been transferred to the account of somebody else, since B will not have withdrawn his money just for fun [9]

—which went to those who withdrew funds

The $26,000 thus registered stock exchange credits of no less than $48,000 If, on the following day, corporation N lends its $20,000 to brokers, who use it to finance the purchase for Mr D of $20,000 worth of the stock newly issued by corporation O, then the figure for stock exchange credits will already have risen to $68,000, with every prospect of gaily rising further The volume of funds which "have flowed onto the stock exchange" will still, however, be no more than the $26,000 subscribed out of the savings of Mr A and the credit expansion of the banks

But does not this clearly prove, it will be asked, that funds were absorbed in stock exchange transactions? Have not $20,000 been shifted from one account to another in a series of unproductive transfers? If it is granted that funds, which incidentally owe their existence chiefly to new credit expansion by the banks[1], are taken up for a certain period of

Part of these funds may be tied up in a chain of financial trans actions,—

[9] It must not be forgotten that Mr B has to pay interest so it is unlikely that he will intend to leave his $6000 on account with his bank without receiving any interest on them Perhaps he needed the money to pay a contractor who is building a summer villa for his wife

[1] See Benjamin M Anderson, "Brokers' Loans and Bank Credit," *Chase Economic Bulletin*, Vol VIII, No 4, October 1928, p 12 "The primary source then of the great volume of free funds in possession of individuals, firms, corporations, foreign banks, investment trusts, &c, available for loans on the Stock Exchange, is the prior expansion in earning assets and deposits by the banks"

time[2] by this "merry-go-round" on the stock exchange, can we say that the level of brokers' loans is any sort of indication of the amount of funds that is thus tied up? If one dollar passes from brokers' loans to new share capital, back to brokers' loans and again to new share capital, and the same process repeats itself many times, *the aggregate of brokers' loans may rise very high, but the one dollar remains one dollar*

—which may raise the statistics of brokers' loans to a multiple of these funds

54 In our example the $10,000 of Mr A and the $16,000 from the banks ($26,000 in all) performed the incredible task of financing a withdrawal of $6000 by Mr B and new issues of $52,000 by corporations But the task does not appear to be so incredible once it is realized that part of the financing of corporations is of a rather peculiar character, viz , that the share capital subscribed is lent to the share purchasers It would of course be a mere coincidence if the new capital of any particular corporation were lent, through the agency of the banks and the brokers, to the corporation's *own* shareholders, but there is nothing extraordinary about corporations in general lending part of their new share capital, via brokers' loans, to the buyers of shares in general What this amounts to is that the buyers of shares remain in debt to the corporations for a part of the price of the shares

Corporations, by making loans to brokers, finance in part the purchase of their own shares by the new stockholders

This fact is of no small significance The circumstance that the buyers of the shares, even if only indirectly, have become debtors of the corporations, means in the first place that the money capital actually

[2] J H Rogers is of the opinion that "beyond the time required for the transfer of the funds (about one day) the further lending capacity of the banking system as a whole suffers virtually no reduction from an increase in such brokers' loans,"—"The Effect of Stock Speculation on the New York Money Market," *Quarterly Journal of Economics*, Vol XL, p 449 But if there is a series of transfer payments, the process can always go on lasting "one day longer"

received by the corporations was less than the full amount of shares sold These purchases of shares required neither the money of the shareholders nor bank credit [3] Since those who bought the shares and borrowed the sales proceeds (indirectly) from the issuing corporations did not need either the savings of the public or bank credit for the purpose, it is obvious that in this case neither the savings of the public nor bank credit can have flowed onto the stock exchange or have been absorbed by it

For this borrowed part of new stock purchases neither savings nor bank credits are required

The fact that the corporations, through their loans to brokers, have become creditors of the purchasers of shares is significant for another reason also The credits are repayable at short notice It would be rather surprising then if these credits were to be called in[4] so gradually that the owners of the shares could pay them off out of current savings In the absence of this possibility the repayment of the funds to the corporations can come from the following sources (1) the gap may be filled by an increase in bank credit, (2) owners of liquid funds may buy the shares at low prices, (3) corporations may buy the shares, or other securities,[5] at low prices

Eventual payment to corporations may take place—

—out of current savings,—

[3] Bank credit was not required for these particular share purchases. On the other hand it played its rôle beforehand in order to create the sentiment necessary to induce buyers to make large purchases on borrowed funds I find that Professor Eiteman has discussed the brokers' loans by corporations in Chapter X of the study by the Twentieth Century Fund on *The Security Markets*, p 323 He has arrived at the same conclusion as I have, viz, that until the corporations "demand for payment materializes, no money is involved"

[4] Incidentally, such credits are for the most part called in through the intermediary the broker demands payment from the buyer whose account becomes undermargined

[5] American corporations under the 'Delaware Charter' may buy back their own shares The purchase of the shares of other corporations, when a break in prices occurred, was less usual than purchases of their own shares The buying up of bonds also comes under the same process, of course The owners of shares who were forced to liquidate had to sell out also bonds that they possessed These were bought by their creditors, the liquid corporations

—through new bank credit,—

In case (1) loans to the brokers by the banks on their own account are substituted for loans on the account of others The new bank loans create bank deposits held by the corporations In case (2) the aggregate of brokers' loans undergoes a sharp decline Bank deposits previously held by somebody as liquid reserves now become deposits of the corporations If the corporations have a use for these cash balances, an act of dishoarding can be said to take place In case (3) the total of brokers' loans falls sharply just as in case (2) The corporations obtain shares especially cheaply from those who owed "them" (only indirectly "them") the purchase price Here bank deposits are neither transferred nor created nor destroyed The corporations simply take securities in payment of loans outstanding [6]

—with idle funds,—

—or by selling securities to the corporations,—

Those who believed rather naively that an enormous amount of stock exchange credit was absorbed by a rising stock market also thought, when they were consistent in their reasoning, that the credits absorbed were set free, either wholly or in part, when stock prices fell [7] A glance at the list given above of the possible ways in which brokers' loans may be liquidated shows that the story of the release of the credits is no truer than the story of their absorption

—and, of course, no funds are "released" by the decline in stock prices

Large sums of brokers' loans are made out of one dollar,—

55 As has already been shown one dollar is capable of creating many dollars' worth of brokers' loans One

[6] The following statement by W J Eiteman deserves mention in this connexion "The total of brokers' loans, hence, represents not the amount of credit used by speculators at the expense of legitimate business, as is so often contended, but rather the amount being put to illegitimate uses by business at the expense of speculators" (*op cit*, *Journal of Political Economy*, 1932, p 690)

[7] See Hans Richter-Altschaeffer, "Some Theoretical Aspects of Stock Market Speculation," *Journal of Political Economy*, 1931, Vol XXXIX, p 233 "A declining stock market at best implies a replenishment of the 'capital reserve' [i e, capital supply] to the extent of a previous reduction, and ordinarily only to a smaller extent"

dollar may become sales proceeds and brokers' loans and again sales proceeds and so on, and in this way produce a continual increase in the figure for brokers' loans

But many dollars' worth of brokers' loans may also be created by no dollar at all This may best be explained by going straight to an example (Ledger balances are shown in Appendix A)

Monday Mr A who possesses a large deposit of securities and therefore has sufficient margin wishes to buy $30,000 worth of shares on credit His broker obtains them from another broker who is selling for the account of Mr B

Settlement takes place on the following day

Tuesday A's broker borrows $30,000 from his bank and pays this sum to B's broker B's broker has received no further orders from his customer and so credits him with the $30,000 and reduces his own bank debts by the same amount

Mr C asks his broker to buy him $20,000 worth of shares on credit His broker obtains them from the broker of a Mr D This transaction will not be settled until to-morrow

Up to now the total amount of brokers' loans has not changed although the margin debts of customers to brokers have risen

Wednesday Mr B withdraws his $30,000 from his broker The broker borrows the money from his bank Mr B offers to lend the $30,000 at call The amount is borrowed by Mr C's broker Mr C's broker uses $10,000 to reduce his bank debt and $20,000 to pay Mr D's broker Mr D's broker credits his customer with the $20,000 and uses the funds to reduce his own bank debt

—that total brokers' loans rise when sellers withdraw and lend to brokers —

On this day the total of loans granted to brokers by the banks on their own account has not risen, but brokers' loans on account of others have risen by $30,000

Thursday Mr D buys $5000 worth of shares His broker obtains them from Mr A's broker who is selling for the account of Mr A

Settlement takes place to-morrow

Friday Mr D withdraws $10,000 from his broker The broker borrows these $10,000 and the $5000 which he owes to A's broker from his bank Mr D offers to lend the $10,000 at call They are borrowed by Mr A's broker, who adds them to the $5000 which he received for the shares sold on behalf of Mr A, and pays back $15,000 to his bank

—and that brokers' loans may increase while customers' margin debts decrease

On this day loans granted to brokers by the banks again remain unchanged Brokers' loans on account of others have increased by $10,000 The margin debts of customers to their brokers have been reduced by $5000 (through Mr A's sale)

Review of the week The total of brokers' loans has risen by $40,000 The whole of the increase was on account of "others" and the loans granted by the banks remained unchanged The margin debts of customers to their brokers have risen by $45,000 (Mr A $30,000 minus $5000, Mr C $20,000) and the brokerage deposits of customers have risen by $5000 (of Mr D) [8]

In our example the rise in brokers' loans on account of "others" did not lead to any fall in loans to brokers from the banks, because those who lent the call money used the proceeds of their sales and not funds which

[8] In order to show that purchases with borrowed money, i e, margin debts of customers, and brokers' loans do not run parallel, we took a case where the former rose from Monday to Wednesday and then fell while the brokers' loans rose throughout

they had held previously If the call loans had been financed, say, by Messrs X and Y out of their bank balances instead of by Messrs B and D out of their sales proceeds, these funds would have led to a net repayment of brokers' loans of the banks [9] Here, however, it was the sales proceeds which were employed to make the loans, the brokers took the loans in order to pay out the sales proceeds, the customers asked for payment of their sales proceeds in order to make the loans

Brokers loans by 'others reduce bank loans, if the funds come from existing bank deposits but not if they come from sales proceeds and old brokerage deposits

56 If the sellers leave their sales proceeds with their brokers, the volume of brokers' loans does not rise despite the rise in margin debts of the buyers The brokers can lend to those who want to buy on margin without themselves borrowing for the purpose, provided the sellers leave their sales proceeds on deposit with the brokers In this case the sellers wait for payment by holding brokerage deposits

The sellers may actually wait for payment either by holding brokerage deposits,—

But now the owners of the brokerage deposits may decide to withdraw their funds and transfer them back to the brokers in the express form of loans The only difference between this and the previous situation is that the brokers now have to pay interest and that the statistics of brokers' loans show an increase This does not, however, alter the fact that the buyers of securities still owe the price to the sellers

—or by making brokers' loans ,—

—only the second method affects statistics of brokers' loans

It is evident that this process does not involve either any inflow of funds or any tie-up of funds, but nevertheless the volume of brokers' loans rises Mr M buys shares from Mr N but does not pay for them Mr N lends the sales proceeds due to him to the broker and through the latter to the purchaser M This simple fact that M buys from N because he expects share prices to rise and N lends the sales proceeds because

There is not any afflux, and still less, any tie up, of funds , and yet figures of brokers' loans rise when the seller indirectly lends to the buyer

[9] 'Loans for 'account of others' liquidate bank credit ' B M Anderson, *op cit* , p 4 Mr Anderson's statement holds when the "others" make their loans out of existing bank deposits

he gets interest on them, is registered in the statistics as a rise in "brokers' loans on account of others" or "from others than banks" And this statistical phenomenon has misled a large number of authors into concluding that the stock exchange absorbed an alarming proportion of the country's credit supply [1]

The credit given by the seller to the buyer could not be given to anybody else,—

This lending by the seller of the shares to the buyer —however dangerous it may be from the point of view of market stability—has deprived nobody of either money or credit The purchaser did not take money away from anybody else by making the purchase, because he did not have or use any money The seller did not take credit away from anybody by lending it to the stock exchange, because he could not have lent to anybody other than the buyer of his shares since he was only able to sell the shares at a favourable price by disposing of them to the buyer who had no funds [2]

[1] See the *Annual Report of the Federal Reserve Board for the Year 1929*, p 1 'Collateral indications derived principally from the intense activity of the security markets and the unprecedented rise of security prices gave unmistakable evidence of an absorption of the country's credit in speculative operations to an alarming extent "

[2] In this sense it is perfectly correct that "Increases in security prices in the boom years of 1928 and 1929 were supported most largely by loans to brokers for account of 'others'—corporations and individuals "—W Randolph Burgess, *The Reserve Banks and the Money Market*, revised edition 1936, p 262 It is a strange thing that the notion that brokers' loans may simply result from the sellers' waiting for their money has, so far as I know, never been clearly formulated Thus F Lavington, who was extremely well informed of the facts of credit markets, thinks exclusively of existing funds when he analyses the sources of stock exchange credit See *The English Capital Market*, p 231 "This money is obtained partly by direct borrowing from the banks and other parties with disposable funds, partly from Stock Exchange firms who lend their own money and also money which they obtain from banking and other sources " Likewise Hawtrey, in inquiring into the source of the funds, never hit upon the idea that they might be derived simply from the lending of sales proceeds Referring to the "loans from others than banks," he asks, on p 59, *op cit* "Who were these other lenders?' When he commences his answer (p 60) by saying that "for the most part the loans from others than banks did not form an addition to the resources of the investment market," it looks as though he is going to hit upon the solution which has been put forward in the text above Instead of this, Hawtrey concludes that these loans "represented money

M had no money with which to finance productive investment and neither had N N had shares which he sold to M on credit This transaction appeared in the statistics as an increase in stock exchange loans

—because neither of the two has liquid funds

57 When these loans are called in it usually happens that the owner of shares who is in debt is at best able to scrape together a small part of what he owes by compelling himself to save out of his current income from other sources (salaries, business profits) But this is, of course, far too little, and he is forced to liquidate his holdings of shares And the person who is most able and willing to buy is the person who lent the call money [3] He is in a liquid position, not in the sense that he has bank notes or bank deposits, but because indirectly he holds the claims against the owners of the shares, claims which have to be paid by the sale of those shares

When the lender of call money buys after the crash, the stocks from the margin debtor,—

The shares which our Mr M now has to sell at a low price are bought by Mr N The seller does not obtain

which was being held back from investment" by the lenders and that "it is safe to say that, if the money had not been lent, it would itself have been invested " A still more explicit formulation is given on page 70 where he says ' the increase in brokers' loans was supplied mainly by the temporary lending of money, which had been saved out of income and would otherwise have been invested " It is hardly necessary to emphasize that Hawtrey does not mean by this that the money by being used as stock exchange credit is withdrawn from real investment On the contrary, he declares categorically on page 73 "But in any case the idea that money lent to the Stock Exchange is withheld from trade and industry is fallacious The money so lent is used directly or indirectly to carry new issues, and the new issues are a channel for financing the production of capital goods "

J M Keynes has hinted several times at the case of the lending of sales proceeds (e g , *Treatise on Money*, Vol I, p 267 and Vol II, p 196) When he came to the interpretation of the level of brokers' loans, however, he did not think of the possibility that loaned sales proceeds might be included We shall comment on Mr Keynes' interpretation in the next chapter

[3] See Benjamin M Anderson, *op cit* , p 14 "Investors lending temporarily to the Stock Exchange look forward to the time when security prices will be more attractive [i e , lower], and when they will take securities themselves, instead of holding loans against securities "

—the buyer has nothing to pay and the seller nothing to receive —

any money for them because he was in debt for them and just as the seller has no money to receive, the buyer has no money to pay The volume of loans outstanding may fall, just as they rose previously, without there being any "inflow," "outflow," "creation," or 'destruction" of bank credit The claims against the unlucky speculators disappear when their creditors buy up their shares from them

—yet figures of brokers' loans fall

Fifth illustration,—

To complete the exposition, the chain of operations may again be illustrated by an example (Ledger balances are shown in Appendix A)

—which shows that customers' margin debts are settled mainly through forced sales ,—

Monday Mr A receives a demand from his broker to put up more margin because the securities held for him have depreciated in value Mr A decides to sell securities which realize $15,000 The shares are bought by Mr B's broker on Mr B's behalf

Settlement takes place to-morrow

—that brokers' loans "by others" fall through stock purchases by call money lenders ,—

Tuesday Mr B calls in $15,000 of the call loans he has outstanding The broker who had borrowed these funds now borrows a bank loan in order to repay B B pays the $15,000 to his broker who in turn pays it to A's broker as the price of the shares he bought from him Mr A has paid in another $1000 in cash to his broker A's broker uses the $16,000 to pay back to his bank

—and that brokers' loans by banks fall, when outside funds are paid in

On this day the volume of loans to brokers granted by the banks on their own account has diminished by $1000 only, whereas the volume of brokers' loans on account of others has diminished by $15,000 The margin debts of customers have diminished by $16,000

It is unnecessary to give further examples of the transactions leading to the liquidation of brokers' loans The process is not really a very complicated one It will suffice to add that it is also possible that B may ask for his call loan to be repaid before he

decides to purchase shares In this case loans to brokers from the banks for their own account will rise for the time being and those on account of others will fall The volume of brokers' loans from the banks will fall again later when B buys the low-priced shares

The fall in the total volume of brokers' loans following on a break in stock prices comes about essentially in three ways

Brokers' loans fall—

(1) speculators whose accounts are undermargined pay in what they can afford in order to maintain their positions,

(2) owners of bank deposits buy the shares sold at low prices by speculators who are forced to reduce their debts,

(3) owners of funds previously lent out as call money buy the shares sold at low prices by speculators who are forced to reduce their debts

What is there to be said about these possibilities as regards their effects on the amount of purchasing power going to other markets?[4] In case (1) sums which would otherwise have become effective demand on the markets for goods are used to repay loans which brokers had previously borrowed from the banks this will result in the disappearance of a certain quantity of bank assets and of circulating bank deposits There will, of course, be a rise in excess reserves and therefore in the capacity of the banks to grant credit to other borrowers, but for the moment there will undeniably be a deflationary effect This case is the real counterpart of the rise in loans from the banks to the brokers which had an inflationary effect on the markets for goods

—when margin debtors put up more money through new saving which is deflationary in its effect on other markets,—

[4] I do not mean the psychological effects of the stock market crash, but the direct effects of the repayment of brokers' loans

—or when holders of bank deposits buy shares from the margin debtors, which mostly means the disappearance of idle balances,—

Case (2) can only be judged if we know how the bank deposits of the buyers of the shares would have been used if the share purchase had not taken place It is possible, though not very probable, that funds will be withdrawn from the markets for goods in this case also [5] It is more probable that the funds will come out of idle balances If these now lead, through the share purchase, to the eventual wiping out of a certain amount of bank credit, there is no net deflationary effect The raising of the excess reserves of the banks through the cancellation of these inactive deposits actually increases the potential supply of new credit in the future [6] In case (3) where call loans are withdrawn in order to purchase shares, and shares are sold in order to pay back call loans, there is nothing which would have any effect either actual or potential on the effective demand in other markets

—or when call money lenders buy shares from the margin debtors which leaves other markets untouched

The analysis shows no valid conclusion can be drawn from changes in brokers' loans

58 The conclusions of the last nine sections are sufficient to shake all confidence in the significance of the statistics of brokers' loans As brokers' loans can rise for so many different reasons, it is quite impossible to diagnose the situation merely on the basis of the aggregate figures for these loans It remains impossible, no matter how perfect a correlation can be shown to exist between the volume of brokers' loans on the one side and the turnover of stocks, the level of stock prices or the velocity of circulation of bank deposits on the other The most naive interpretation of all was that which said that brokers' loans represented credit tied up in stock

[5] Eiteman, if I do not misunderstand him, seems to be of this opinion See *op cit*, *Journal of Political Economy*, p 690

[6] This is the only point, and a weak one at that, in support of those who expect a decline in brokers' loans to benefit "legitimate business" It is somewhat reminiscent of Till Eulenspiegel when somebody is glad that there has been a shrinkage of bank balances because then it is possible for them to expand again

exchange transactions But even rather more "enlightened" interpretations prove to be untenable when regard is had to the analysis of this chapter Take, for instance, the contention that the total of brokers' loans represents the amount of funds that have flowed through the stock exchange into industry, or the idea that the truth lies somewhere in the middle, i e, that brokers' loans represent funds which have flowed onto the stock exchange, and part of these funds flows out into "productive" markets and part is tied up None of these arguments is tenable since a rise in brokers' loans does not necessarily warrant the conclusion that there has been a flow of funds onto the stock exchange

Below is an attempt to draw up a list of the various kinds of operations which may lie at the back of an increase in brokers' loans The list is undoubtedly incomplete but will nevertheless be sufficient for our purposes In all cases it is assumed that somebody has bought securities on borrowed funds

Ten types of operations leading to a rise in brokers' loans are summarized

This transaction may be connected with any of the following operations

(1) industrial corporations have issued new shares, received money (bank deposits) for them and spent it on real investment,

(2) individual business men or firms, who had previously invested part of their funds in shares, have sold shares, received money (bank deposits) for them, and spent it on real investment in their own businesses,

(3) individuals, who had previously invested part of their funds in shares, have sold shares, received money (bank deposits) for them, and spent it on consumption,

(4) individuals, who have made capital gains as a result of the rise in share prices, have realized

their gains, withdrawn them in the form of money (bank deposits), and spent them on consumption,

(5) corporations have issued new shares but have used the proceeds immediately to grant loans to brokers,

(6) individuals or firms have sold shares from their holdings but have used the proceeds immediately for granting loans to brokers,

(7) corporations have issued new shares and have the money proceeds (bank deposits) in their accounts, for a few days, until their use in further financial transactions,

(8) individuals and firms have sold old shares from their holdings and have the money proceeds (bank deposits) in their accounts, for a few days, until their use in further financial transactions;

(9) corporations have issued new shares and leave the money proceeds (bank deposits) lying idle as liquid cash reserves,

(10) individuals or firms have sold shares from their holdings and leave the money proceeds (bank deposits) lying idle in their liquid cash reserve

No inflow of funds in two cases,—

A real inflow of funds (money capital that has either been newly saved, or newly dishoarded, or newly created out of bank credit) has taken place in cases (1-4) and (7-10) In cases (5) and (6) there has been no inflow at all, or at least not as far as the end effect is concerned (See §§ 54, 55, 56 Bank credit, for instance, which was created for the purpose of paying out funds to the sellers was, if they used it for granting loans to brokers, repaid and so dis-

appeared again) In cases (1-4) the funds flowing onto the stock market were spent on the markets for commodities, in cases (1) and (2) they were used for production, and in cases (3) and (4) for consumption In cases (7-10) the funds flowing onto the stock market were not spent on the markets for goods, in cases (7 and (8) the money (bank deposits) continued to circulate in the financial sphere, and in cases (9) and (10) it went into the idle cash reserves of pessimistic hoarders

—funds used for buying producers' goods in two cases, for buying consumers' goods in two cases, tied up in financial transactions in two cases and locked up in idle balances in two cases

Nowhere are there any statistical data to show how the total volume of brokers' loans at any time is distributed over these ten items To anybody with a sense of proportion, however, it would appear that cases (7) and (8), the tie-up of funds (bank deposits) in stock exchange transactions, cannot be responsible for more than an extremely small fraction of brokers loans Neither can it reasonably be held that cases (9) and (10), hoarding by pessimistic holders of money, are responsible for the whole or the greater part of brokers' loans as some writers seem to think (This topic will be taken up in the next chapter)

The smallest part is played by the absorption cases

A high official of the Federal Reserve System expressed only recently the following opinion[7] "We are inclined to conclude that the best evidence on whether expansion of credit through an increase in security loans has a stimulating effect on business or is 'absorbed' by the stock market, is to be found in data on changes in business volume and in prices "
He proposes to investigate whether "the expansion in business [was or] was not in proportion to the expansion in credit if all brokers' loans are included in the credit figures " Here, then, brokers' loans on account of others are expressly included in the credit expansion, and if they are found not to have resulted

[7] In a letter to the present author dated 22nd July, 1937

in any business expansion they are to be regarded as having been absorbed by the stock exchange The preceding sections have demonstrated that this point of view is untenable because an increase in brokers' loans on account of others than banks seldom means a further expansion of credit Lending by the seller of the shares to the buyer, which finds expression in an increase in brokers' loans, can certainly not lead to a business expansion, but neither can it be regarded as being "absorbed by the stock exchange"

To repeat once more our main conclusion figures giving the sum total of brokers' loans tell us absolutely nothing about the absorption of credit by the stock market

CHAPTER VIII

THE LIQUID FUNDS OF BEARISH SELLERS

59 The scare that an enormous volume of funds might be tied up in stock transactions was not taken seriously by many economists of repute Their chief argument against this fear of absorption was that the "money work to be done" is not increased or not substantially increased by the turnover on the stock market, or that the effect of such an increase is minimized or compensated by the circumstance that the velocity of circulation of the funds used on this market is extremely high and, moreover, elastic Some authors, however, pointed to another possible source of absorption the absorption of liquid funds by bearish sellers of shares The cause of absorption may perhaps be not the stock market turnover but the hoarding of sales proceeds by sellers who have withdrawn from the market

Absorption of funds in securities transactions is considered negligible—

Thomas Balogh termed the absorption in stock transactions as "technical absorption"[1] and contrasted it with the absorption due to the hoarding of sales proceeds He believed that the first "will never be altogether negligible" but, nevertheless, will be insignificant compared with the second [2]

—in comparison to possible absorption through "hoarding" by sellers

John Maynard Keynes, who is the most prominent of the adherents of the theory of absorption through

[1] Thomas Balogh, "Absorption of Credit by the Stock Exchange," *American Economic Review*, Vol XX, 1930, p 659

[2] *Ibid*, p 660 "an incomparably more important parallel friction' in the outflow of circulating media to other markets results from the fact that many sellers will decide to use the proceeds of their sales to build up cash reserves or to leave them with their banks for later use'

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hoarding attached little significance to the theory of "technical absorption" Keynes treats the stock exchange turnover as a part of the "financial circulation", it is carried out by means of "business deposits B".[3] Their velocity "is so very high ... that the *absolute* amount of the variations in the volume of money so employed cannot ordinarily be very great"[4] A rising turnover on the stock exchange may perhaps require more of these "business deposits B," but "on account of their very high velocity of circulation any necessary increase in them is easily supplied without much effect on the supply of money for other purposes"[5] There is then almost no technical absorption "The main variation in the total demand for money for financial purposes arises ... in quite a different way"[6] The important element in Mr Keynes' theory is the effect of the stock boom on the liquidity preferences of many holders of money

60 Whether an individual will want to invest his liquid balances in securities, lend them out, or leave them in his banking account, depends, according to Mr Keynes' theory, on the expectations of the owner of funds regarding the future development of security prices and interest rates[7] There are many savers who do not take much account of things of this kind and keep savings deposits no matter what the state of the market (Keynes calls these people the owners of "savings deposits A") There are, however, others who hold sometimes securities and sometimes savings deposits (These are the owners of "savings deposits

[3] *A Treatise on Money*, Vol I, pp 243 ff
[4] *Ibid*, p 249
[5] *Ibid*, p 256
[6] *Ibid*, p 249
[7] *A Treatise on Money*, Vol I p 250, *General Theory of Employment, Interest, and Money*, p 170

B" in Keynes' treatment) Anybody from among the latter group who at any time holds a substantial part of his wealth in his banking account or in other words anybody who holds "savings deposits B," evidently does so because at current prices securities do not seem attractive to him The savings deposits B "comprise what we will call the 'bear' position " They are owned by 'those who would normally be holders of securities, but prefer for the time being to hold liquid claims on cash in the form of savings deposits," because they expect "that securities will fall in cash value "[8] There obviously exists therefore a "difference of opinion as to the prospects of securities"[9] between people who buy securities at the prevailing prices and the "bears" who expect the prices to fall and therefore prefer to hold savings deposits

Owners of funds are said to choose between holding securities or bank deposits

Keynes goes on to describe four phases of the attitude of the market towards securities and savings deposits In phase I, bull sentiment becomes increasingly general owners of savings deposits now prefer to buy securities, the sellers are not pessimistic either, but are probably merely more optimistic about other securities or about other outlets for their sales proceeds, the "savings deposits B" become "business deposits" and "income deposits " Thus "when the bullish sentiment is on the increase, there will be a tendency for the savings deposits to fall " This is a factor which contributes to the general upswing in economic activity, because the savings deposits were inactive deposits, whereas the business and income deposits are active accounts and consequently effective

When securities are bought with idle savings deposits, active checking deposits increase

[8] *Treatise*, Vol I, p 250 Keynes uses the term ' bear in a much wider sense than it has in stock exchange jargon where it usually refers to short sellers

[9] *Ibid* , p 251

purchasing power[1] The withdrawal of savings deposits in order to buy securities thus has "the same effect on industry as an increase in the supply of money"[2]

After the rise in security prices has reached a certain point, that is to say, following on the phase in which bull sentiment was fairly general, we come to phase II in which the sentiment is divided While the boom is still going on, some people begin to think that prices have already risen sufficiently high This group increases in number the higher the prices rise Thus *vis-a-vis* of the "bull" group there is now a "bear" group, that is a group who sell their securities without reinvesting the sales proceeds "And if security prices go still higher than this, then the volume of savings deposits will be actually increased," Mr Keynes concludes[3] Just as the "bull market with a consensus of opinion" turned savings deposits into active demand deposits the "bull market with a division of opinion" causes active demand deposits to become idle savings deposits And this has "the same effects as a decrease in the supply of money"[4]

When market sentiment is divided, bearish sellers, it is said, turn active accounts into idle savings deposits,—

Phases III and IV both relate to a falling market On a "bear market with a consensus of opinion" there will, according to Keynes, be a general flight of funds into savings deposits The deflationary effect is obvious On a "bear market with a division of

1 Since English banks keep the same reserve ratios against deposits of all kinds, the lending capacity of the banks is not changed by a transfer of deposits from savings to checking account There is, therefore, nothing to compensate the increased velocity of circulation of all deposits The same thing happening in the United States would increase the required reserves of the banks and thus diminish their excess reserves If the excess reserves were not substantial, the consequent contraction in the lending power of the banks would in part compensate the effects of the increased velocity of circulation of bank deposits

2 *Ibid*, p 253

3 *Ibid*, p 251

4 *Ibid*, p 253

opinion" the situation reverses itself Owners of savings deposits begin to think that the fall in prices has been exaggerated, or at least that prices have reached their bottom, and so they start buying and thus utilize their savings deposits again

The relevant phase for our discussion is phase II For this relates to the period of advanced boom when security prices have risen so high as "to exceed the expectation of some 'bull' and so influence him to sell for cash and join the 'bear' brigade"[5] The essential factor, so far as Keynes is concerned, is that this bear position, which gradually gains in strength, finds expression mainly in a rise in savings deposits Demand deposits which had been created by new bank credit, and demand deposits which had constituted the active cash balances of firms and income recipients, are used by the bulls to make security purchases, and owing to the bear sentiment of the sellers, are transformed into idle savings deposits It is in this process that Keynes sees the risk "of the Financial Circulation stealing resources from the Industrial Circulation"[6]

—thus, a prolonged stock market boom would lead to an increase in idle savings deposits at the expense of business

61 In the opinion of many practical bankers, and of others, who still hold views that were current fifty years ago (and also according to views set forth in many a textbook) the deposit of sales proceeds on savings account with a bank would not be at all in the nature of a deflationary act The banks, it is argued, will be enabled to loan out "the funds deposited with them"

Such views presumably date from times when a deposit with a bank usually took the form of a deposit of coin or notes The reason why these views still survive in the days of cheque payments is probably

[5] *General Theory*, p 170

[6] *Treatise*, Vol I, p 254

that any individual bank that receives the deposit of a cheque drawn on another bank actually does receive additional funds If we look at the banking system as a whole, however it is at once clear that when cheque payments are the rule the banks do not receive any additional funds when people "deposit" their receipts with the banks all that takes place is a transfer of reserve balances and deposits from one bank to another "Deposits" do not put any funds at the disposal of the banks, if all are taken together [7]

It is true contrary to old fashioned views, that a switch of active funds into savings deposits is deflationary

It is undeniable therefore that depositing funds in savings account can exert a deflationary effect because of the switch from circulating deposits to idle deposits which is involved And if "bearish sellers" deposit their sales proceeds on savings account, it may have "the effect of altering the quantity of money available for the Industrial Circulation"[8] But is it very probable that they will do this to any large extent?

However, it is question able whether sellers do accumulate savings accounts,—

There is no direct statistical evidence either for or against this accumulation of savings accounts by bearish sellers But if an examination were to be made of the origin of all savings deposits, it would, in my opinion, come out very unfavourably for the hypothesis that we are discussing It would, however, be ungenerous to take the expression "savings deposits absolutely literally As is well known, to the chagrin of all those who have occasion to deal with banking statistics, money "saved" is often left on demand deposit, and, on the other hand, firms often

[7] In England the lending capacity of the banks is not changed when deposits are transferred from current to savings account because the same reserves are held against all deposits In the United States a deposit on savings account would raise the excess reserves since savings deposits require lower reserve ratios if the ratio against demand deposits is 20 per cent and the ratio against time deposits 6 per cent, a shift of \$100 from demand to time deposit would release \$14 of reserves This is capable of resulting gradually in new loans reaching a maximum of \$70, still leaving a deficiency of \$30 of active balances

[8] *Treatise*, p 254

hold part of their cash reserves on time deposit Thus the hypothesis that the proceeds of the sales of shares are deposited on savings account will gain in plausibility if we also count under "savings deposits B" sales proceeds which are left unused on demand deposit But as we shall attempt to show, there are reasons for thinking that even this interpretation of the hypothesis in question fails to give it the importance that has been attributed to it

—or even idle demand deposits

Yet another extension of Mr Keynes' hypothesis has, however, to be made we ought not to impute the rise in "savings deposits B," which is assumed to result from high security prices, simply and solely to the sales proceeds of bears Mr Keynes included a second source current new savings which on account of the high prices of securities are put into savings account instead of being used to purchase securities [9] It is, of course, quite impossible to find out whether the savers who have deposited their savings proceeds on savings account would have bought securities instead, if the level of security prices had been lower Nevertheless, there is one "theoretical" consideration which may give us a clue So far as small savers in the lower and middle income groups are concerned, it will be nearer the truth to assume the opposite of Mr Keynes' hypothesis, it may be assumed that such people, who would normally never have thought of engaging in stock exchange operations become infected with the general speculative fever and use the funds, which they would otherwise have put in savings account, to buy securities So far as concerns savings out of larger incomes or corporation surpluses, it is again safe to assume that the available funds will not

High stock prices might frighten off current savings from stock purchases and divert them into idle accounts

This is unlikely because rising stock prices make small savers bullish—

[9] *Ibid*, p 267 'But in so far as the bears add the proceeds of their sales (*or of their refraining from buying securities with their current savings*) to the savings deposits this uses up part of the new money' (italics mine)

—and large savers call money lenders

be put in savings deposit with the banks, when the high money rates prevailing in the advanced stages of the speculative boom make it profitable to loan them out at call

The simultaneous rise of stock prices, brokers' loans, and time deposits, in 1929, misled observers

62 Before presenting the evidence which speaks against Keynes' hypothesis of the hoarding of sales proceeds, a short summary may be given of such material as there is which might seem to lend support to the hypothesis Mr Keynes was confirmed in his opinion by the following facts In the United States from 1927 to 1929 stock prices rose, and so did brokers' loans and time deposits This common movement seemed to Mr Keynes to represent an unmistakable correlation He took it as a "perfect statistical test"[1] of the proposition that a bear-bull position had developed of the kind in which the bulls borrow funds which the bears deposit on savings account

Active demand deposits did not fall but increased too,—

Several points may aid in evaluating the correctness of this interpretation When a bull speculator uses either his own money or money borrowed from existing funds in order to buy shares from a bear, and the bear deposits the proceeds on savings account, demand deposits will fall and time deposits will rise This is not what happened in the United States in the period in question, for demand deposits rose along with time deposits and both stopped rising at the same time If a bull speculator borrows money from a bank in order to buy shares from a bear and the bear puts his sales proceeds on savings account with his bank, demand deposits will rise only for a few hours or a day, that is to say, until the time when the sales proceeds are deposited Thus the volume of demand deposits will remain unchanged while time deposits rise This does not conform with events in the United States either, for as has already been remarked the volume of demand

[1] *Ibid*, Vol II, p 195

deposits did not remain constant during the time when time deposits were rising, they rose simultaneously, even if at a slower rate [2]

Thus, no existing circulating media were withdrawn from the "industrial circulation" by the piling up of savings deposits, and not all of the new circulating media deriving from bank credit were turned into savings deposits Since demand deposits also rose, despite the rise in savings deposits, the most that might be said is that only part of the continual expansion of bank credit led to an increase in the active circulation while a large part was placed on savings deposit where it was inactive But even this cannot be proved First of all it has to be remembered that in the United States transfers to time deposit, owing to the lower reserve ratio held against the latter, release bank reserves, thus making it possible for the credit expansion to go further than would otherwise be the case Furthermore, it is very doubtful whether the piling up of savings deposits really did mean that active circulating media became idle The following consideration is evidence to the contrary

—and their increase was not even impaired by the growth of time deposits,—

[2] The data given by Mr Keynes are not reliable since they are taken from the figures of only those banks which issue weekly reports, instead of from the figures of all banks The weekly reporting banks are not for all purposes a representative cross section of the entire banking system Mr Keynes' statistics (*Treatise*, Vol II, p 190) show a rise of 2 5 per cent in demand deposits from 1926 to 1929 and a rise of 21 5 per cent in time deposits The figures for all banks are, however, as follows

	Demand Deposits (Adjusted)	Increase or Decrease	Time Deposits	Increase or Decrease
1926	21,707	—	25 110	—
1927	22,462	+755	26,813	+1703
1928	22,738	+276	28,933	+2120
1929	22,744	+ 6	28,795	− 138

These figures which are all in millions of dollars and represent the position on 30th June each year, are based on the Reports of the Federal Reserve Board and have been taken from Lauchlin Currie's *The Supply and Control of Money in the United States* (pp 33 and 70) Demand deposits show an increase over the whole period of $1037 million or 4 78 per cent, and time deposits show an increase of $3685 million or 14 67 per cent

A credit expansion part of which leads to the piling up of idle savings deposits, must lead to a substantial decrease in the average velocity of circulation of total bank deposits One of the most important facts in a verification of Keynes hypothesis would, therefore be a fall in the velocity of circulation of bank deposits In reality, however, their velocity of circulation neither declined nor even remained constant, but rose sharply The rise was steeper and more general than could be explained perhaps by reference to stock exchange operations and related transactions What then was the rest of the explanation? Evidently a substantial part of the rise in the velocity of circulation was due to a change, which was observable in that period, in the attitude of firms toward various forms of liquid assets firms began to hold a smaller part of their liquid funds in the form of demand deposits than had been customary in the past Many firms lent out their cash balances at call, and others (often upon request of their bankers) held time deposits instead of demand deposits Both factors led to an increase in the velocity of circulation In the one case cash balances, which had previously been held as idle reserves, became working balances of other firms, and in the other case idle cash reserves were removed from demand deposit and placed on time deposit This had the obvious effect of increasing the average velocity of circulation of demand deposits, and, if the increased lending capacity of the banks was used to create new demand deposits, the velocity of circulation of all deposits was bound to be raised [3]

—because this growth was due to a switch of idle balances,—

—as can be seen from the increased velocity of circulation

According to my hypothesis the growth of time deposits and the rise in the velocity of circulation

[3] Cf Woodlief Thomas, 'Use of Credit in Security Speculation, *American Economic Review*, Vol XXV, supplement 1935, p 25 'This supply of funds came in part from a shifting of deposits from the demand to the time category, which released reserves "

can be explained as interdependent parts of one process Mr Keynes hypothesis leaves the fact of the rise in the velocity of circulation without explanation, indeed, this rise in the velocity of circulation may be regarded as disproving his hypothesis In Mr Keynes hypothesis the rise in time deposits represented the transformation of active demand deposits into idle time deposits, hence a hoarding process In my hypothesis there was a substitution of time deposits for inactive demand deposits with a consequent release of reserves enabling the banks to create active demand deposits, hence a dishoarding process

The evidence points to dishoarding, not to hoarding

The suggestion that the bears may have hoarded their sales proceeds in the form of idle demand deposits has no more secure a foundation than the savings deposit hypothesis For if demand deposits had been kept idle there would have been a diminution of the velocity of circulation The sensational rise in the velocity of circulation in that period is so notorious that the statistics need not be reproduced here

No statistics are necessary to prove that there did exist a bear position We know for a fact that there were many people who sold their shares because they thought the prices had been driven too high But there is nothing in the available statistics to show that these sellers hoarded a substantial part of their sales proceeds and so took money away from the ' industrial circulation '[4]

There were bears, but they did not hoard

63 Statistical proofs are never of any value, and statistical disproofs are seldom so, unless they can be rationalized by theoretical analysis of the causal relationships We have shown that no *statistical*

[4] Cf Charles O Hardy, *Credit Policies of the Federal Reserve System*, p 172 It is to be emphasized however, that there is not the slightest evidence that there was any serious locking up of deposits in speculation in 1928 29

evidence could be found for the alleged hoarding by bears who sold out It remains to give the *reasons* why it is improbable that sellers of securities, during a stock market boom will hoard their sales proceeds

Bearish sellers regard call loans as just as liquid as money,—

It is no doubt true that anybody who is expecting a break in share prices will prefer to be "liquid" But it is not true that the only way to procure this liquidity is to hold cash or bank deposits, or that it is in fact procured in this way Loans which are perfectly secure and can be recovered at any time are as good as cash for satisfying the demand for liquidity [5] Call loans are loans of this kind, and even if they are not defined as money they are often regarded as just as liquid as money Sellers of shares who want to wait for share prices to fall can satisfy their desire for liquidity perfectly well without cash or bank deposits, by lending their funds at call

—and highly profitable too

Low interest rates encourage the holding of higher reserves of idle cash A rising stock market means that corporations are able to obtain capital more cheaply This may have led some people to suppose that corporations, with money so cheap, will most probably hold higher cash reserves But while it is true that the high stock prices mean cheaper borrowing facilities for corporations, it would be quite wrong to suppose that for this reason the holding of idle funds will not cost much The cost depends not on the conditions on which one happened to obtain something but on the alternative ways of using it (i e, "opportunity costs") Even if the corporations had obtained their new funds almost gratis, they would still consider that it "costs" them 6 or 8 or 10 per cent, according to the prevailing rates on call money, if they refrain from loaning out their funds at call

[5] F Lavington put strong emphasis on this point in his explanation of "the price of pure waiting, the net rate of interest" See *The English Capital Market*, pp 92 ff

When holders of securities are induced to sell out because they think that share prices have been driven too high these sellers will at the same time have the incentive to lend out their sales proceeds because of the high interest rates which bulls are prepared to pay for call loans The bearish seller who operates on a large scale will not leave his sales proceeds on savings deposit, nor will he leave them in his checking account he will place them at the disposal of the stock market What this comes to is that the bear who sells lets the bull who buys owe him payment and he does not therefore receive any funds to hoard

The bearish seller loans to the bullish buyer, with no funds involved or hoarded

The concept of "liquidity preference" is confusing unless it is constantly remembered that opinions fluctuate concerning the objects which are suitable for satisfying the desire for liquidity If liquidity preference is by definition related exclusively to cash and bank deposits, it is wrong to conclude that a strengthening of the bear position will raise liquidity preference in this narrow sense, for the supply of perfect "liquidity substitutes" in the form of sight claims against bulls might at the same time be increased so much as to leave the net demand for cash and bank deposits unchanged If, however, we define liquidity preference in a wider sense so that it relates to all objects which are considered by individuals and firms to be just as liquid as cash and bank deposits, then it is certainly true that a strengthening of the bear position will involve a raising of liquidity preference in this broad sense, but in this case it is wrong to put the liquidity function against the available quantity of cash and bank deposits since the supply of "objects of liquidity preference" is not an independent variable If the bear position is described in terms of a demand for liquidity, then it has to be recognized that the bull position, through its borrowing, brings

If the bear position constitutes demand for liquidity, —

—the bull position provides the liquid assets through its borrowing

with it a supply of liquid assets it creates "liquid" sight obligations [6]

64 In short, it is anything but probable that the stock boom will lead to the piling up of idle cash reserves by sellers of securities It was pointed out in the previous chapter that a substantial part of the rise in brokers' loans was to be interpreted as lending by the sellers to the buyers Thus we have no use for Mr Keynes' interpretation according to which brokers' loans were employed to finance the holding of cash by the sellers

Incidentally, there are passages in Mr Keynes' *Treatise* which fit in with my own explanation He says for example "But the fact that the technique of the New York market allows an important proportion of the 'bear' position to be lent directly to the 'bulls' without the interposition of the banking system facilitated immense fluctuations in the magnitude of this position without the disturbance to the Industrial Circulation "[7] In other words the bear position consisted here not in the piling up of savings deposits or idle cash balances, but in the lending of the purchase price to the buyer In this case, however, the bear position would not be deflationary

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[6] Mr Keynes hypothesis of the "bull bear position' and the "speculative motive' for holding cash, is a corner stone of his *Treatise* and of his *General Theory* "When stock prices have risen beyond a certain point, the machinery of the two views' functions" (*Treatise*, Vol II, p 195) 'The individual who believes that future" security prices will be below the prices ' assumed by the market has a reason for keeping actual liquid cash (*General Theory*, p 170, in the *General Theory* the argument runs, of course, more in terms of future interest rates than in terms of future security prices) An excellent critique of the Keynesian hypothesis is to be found in an article by L M Lachmann, "Uncertainty and Liquidity Preference," *Economica*, Vol IV, New Series August 1937

[7] *Treatise*, Vol II, p 196 The clause ' without interposition of the banking system" means without encroaching on bank reserves and relates to the loans granted to brokers by the banks "on account of others "

it would involve neither a rise in savings deposits nor an increase in the "financial circulation." This is equivalent then to Mr Keynes unconcernedly discarding his own hypothesis [8]

It would of course be possible for both kinds of bear position to exist side by side Many sellers who think stock prices are going to fall may loan out their money while other sellers may keep it in cash or on savings deposit The latter possibility becomes more plausible if we assume that many of the sellers who are nervous about the high stock prices are people of small means, who neither have the notion that it is possible to lend money at call nor have the connexions which are necessary for carrying out transactions of that kind But this would be the exception rather than the rule, as is clear from the fact that it is precisely the small man who holds onto his stocks longest, and that it is the experienced speculator and the capitalist who sell out at high prices Experienced capitalists, however, have better ways of using their funds than to put them into a savings account (or a "thrift pass book") at a bank [9]

"Small bears" might hoard while "big bears" loan,—

—but usually the small speculator holds on longest to his stocks

If a classification were made of the various uses to which people put the sales proceeds from their stocks sold while prices were still rising, the item "deposits on savings account" would probably be almost negligible Leaving out the item "purchase of other securities" (which is done with the brokerage deposit and, thus, requires neither cash nor credit) the classification would contain the items "purchase of means

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[8] Professor John H Williams has also remarked on Keynes inconsistency In his article on "The Monetary Doctrines of J M Keynes" in the *Quarterly Journal of Economics*, 1931, Vol 45, p 569, he said "But, so far as I can see, the savings deposits were in effect, never made if they were loaned out again by their holders the holders cannot have them and not have them at the same time

[9] See also Keynes, *Treatise*, Vol I, p 252

of production" and "purchase of consumers' goods," followed by "short term lending" (loans to brokers), and finally "repayment of debts" Among the sellers who do not buy anything with their sales proceeds, the most important groups, in the phase of rising stock prices and high call rates, are the capitalists who lend their funds, and speculators who pay back funds which they had borrowed previously The first group takes advantage of the high interest rates on the money market by lending and is liquid without hoarding, the second group becomes more liquid by paying back debts and has nothing to hoard

The liquidity preference of most bearish sellers is exercised by making call loans and by repaying debts

The period of rising stock prices and high call rates is thus, even if there is a division of opinion about the future course of stock prices, not a period of heavy hoarding by those who sell stocks In the advanced stages of the boom there may perhaps be a few cautious small investors who get out of the market in time and acquire savings deposits, but their action is undoubtedly outweighed by that of other small investors who, as a result of the long lasting rise, succumb to the temptation and use their savings deposits to purchase securities

When the stock crash finally comes, when bull sentiment has vanished and stock prices fall, there will first of all be sales which again do not lead to the piling up either of idle cash reserves or of savings deposits the sales which take place at the time of the crash consist predominantly of the selling out of accounts that became undermargined These unfortunate sellers do not receive any funds that they could hoard At this stage call rates are still attractive enough to provide a profitable outlet for the funds of those sellers who have any funds to receive It is not until the bear market has "settled down" to a general pessimistic feeling, a low level of brokers'

Only after the crash, with margin debts largely repaid and call rates low, will liquid funds of bearish sellers accumulate

loans and low call rates, that the piling up of idle bank deposits described by Mr Keynes takes place to any considerable extent

The various considerations advanced in this chapter make it appear improbable that the speculative boom on the stock market will lead in any substantial measure to the absorption of circulating media or bank credits through the induced demand for liquidity on the part of bearish sellers It is absolutely impossible to ascribe the heavy rise in brokers' loans during the boom entirely or in large part to the piling up of idle bank deposits by bearish sellers [10]

The increase in brokers loans were not due to idle funds

[10] Professor Howard S Ellis accepts Keynes hypothesis See *op cit*, p 386 "In any event, the conscious retention of funds in idleness, whether described accurately in terms of neutralized bank reserves, or more loosely under the aspect of brokers loans or the appearance of weaker hands constitutes a demonstrable ground for credit absorption" Professor Ellis has taken the 'retention of funds in idleness' as given and has not examined the facts to see whether it is a phenomenon which really does accompany the stock boom